THE

QUARTERLY JOURNAL

OF

ECONOMICS

FEBRUARY, 1914

THE FEDERAL RESERVE ACT OF 1913

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I. The Spirit and Objects of the Act

The primary purpose of the Federal Reserve Act of December 23, 1913, is to make certain that there will always be an available supply of money and credit in this country with which to meet unusual banking requirements. Banks of a new class, to be known as Federal Reserve Banks, are to be established, and upon these banks is to rest the heavy responsibility of supporting the structure of credit in periods of financial strain. The new banks are expected to keep them-

selves in a condition of such strength in ordinary times that the other banks may safely rely upon them for all needed cash and credit in emergencies. In the past, the banks in this country, when subjected to financial pressure, have relied mainly upon loan contraction and the selling of securities. In future it is expected that they will resort to the Federal Reserve Banks, securing additional funds from these by rediscounting commercial loans. If the new arrangements work well, loans in future will not be reduced merely for the purpose of strengthening the banks. Loan contraction will take place only when there is evidence of an over-extended condition of business; and even then contraction will be carried through gradually, so as to conserve all interests so far as may be possible. Under the new system a most important influence, if not the most important single influence determining the character of banking operations, will be just the reverse of what it has been in the past.

To meet the heavy responsibilities placed upon the Federal Reserve Banks, two things are absolutely essential — good management, and ample powers and resources. Good management cannot be secured with certainty by means of legislative provisions, however carefully designed with that end in view. In the particular instance of the Federal Reserve Act, an ingenious combination of government and banking influence in selecting the management is provided. Purely banking operations are very largely to be handled by boards of directors, a majority of the membership of which is to be chosen by banks. General supervision, and for some purposes control, is placed with the Federal Reserve Board, which is to be appointed by the President of the United States, by and with the advice and consent of the Senate. Experience alone can deter-

mine the wisdom of these arrangements for securing effective management.

The Federal Reserve Banks are to exercise wide powers, and would seem likely to have ample resources. The country is to be divided into not less than eight, nor more than twelve districts, in each of which a Federal Reserve Bank is to be established. All national banks are required, and qualified state banking institutions are invited, to subscribe to the capital of the Reserve Bank of their district. Subscribing banks, to be known as member banks, are required to keep a part of their reserve with their Federal Reserve Bank. These banks will presumably receive most if not all of the general funds of the United States Government. They will provide an elastic currency, issuing notes secured by their commercial assets. They are also empowered to undertake the business of collecting and clearing checks throughout the entire country, thus providing an organization for making settlements between banks in different places, the lack of which has been one of the most serious defects in our banking system.

Each Federal Reserve Bank will be a central bank for the section of the country which it is to serve. It will have all of the responsibilities and most of the powers of central banks in the various European countries; but largely because the system is to be superimposed upon a fully developed banking system, some important provisions of the Federal Reserve Act are unlike anything to be found in European legislation. The Federal Reserve Banks are to receive deposits from the government and from member banks only. Ordinarily they will lend to member banks only. All European central banks, tho the bulk of their business is with banks and bankers, may deal with the general public and do so. The most striking divergence from

European example, however, is the really novel plan of a system of regional banks in place of a single central bank. But the extent of this divergence is generally exaggerated. Political boundaries are indeed in large measure economic and financial boundaries as well; but central banks in the European countries do act and react upon each other, often working in harmony, and yet at times very much at cross purposes. If all Europe were brought under a single government, very likely the various existing central banks would be merged into a single institution. In some respects this would be advantageous, but it would not be absolutely necessary. Certainly European arrangements are not so fundamentally unlike those of a system of regional banks in a single country of great size, as to afford ground for the opinion that in setting up this system foreign experience has been altogether disregarded.

The various considerations which led to the adoption of the plan for regional banks, rather than a single central institution, deserve careful attention, since they indicate the spirit and purpose of the Federal Reserve Act. A single central bank was the solution of the banking problem reached without a dissenting voice by the members of the National Monetary Commission. The bill which the Commission prepared was a notable achievement. Pioneer work tho much of it necessarily was, very few defects on the technical banking side were disclosed in the discussion which followed the statement of the proposed measure. Its provisions regarding banking operations, including relations with other banks, are embodied with few changes of an essential character in the Federal Reserve Act. Most of the important differences between the bill and the Federal Reserve Act reflect differences in spirit and purpose rather than in methods. A central bank and also the

system of regional banks necessarily involve placing somewhere very extensive power to influence and control credit. In the present temper of public opinion, the possession of great economic power is not tolerated in the absence of a large measure of government supervision and control. But unfortunately, in framing its measure the Monetary Commission failed to realize the fundamental importance of this consideration as a factor in securing general public approval. In devising a form of organization, competent management and approval in banking circles were evidently the controlling factors. An organization was proposed under which out of forty-five directors, but three were to represent the government, the remainder being selected in various ways by bankers. Support from some who were the most bitter opponents of the measure might have been secured if the bill had provided for a larger measure of government control; but an equal or even greater number of adherents would probably have been lost. Under the plan of the Commission and indeed under any central bank plan, government supervision and control cannot be made effective without at the same time placing the details of operation in charge of government officials. Few of the most ardent advocates of a central bank were prepared to take this extreme step.

Under the plan of organization of regional banks, the difficulty of combining government control and private management vanished. Purely banking matters, such as the granting of loans, could be placed with boards entirely or mainly composed of persons selected by the bankers whose funds were to provide most of the necessary resources. On the other hand, supervision and whatever measure of control might be deemed advisable, could be placed with a board mainly or entirely

appointed by the President of the United States. Differences of opinion may be entertained regarding the particular arrangements in the Federal Reserve Act for selecting the various administrative bodies, and regarding the division of power between the directorates of the Federal Reserve Banks and the Federal Reserve Board. If experience should disclose defects in this form of organization, it is flexible enough to permit at any time an extension of government or of banking influence.

Another important advantage of the regional system is to be noted. The operation of a central bank would be far more likely to give rise to sectional antagonism. This danger was apparently fully realized by the members of the National Monetary Commission, and elaborate arrangements for selecting the management were devised in order to make certain that each section of the country should be properly represented. But obviously regional banks, managed by local people, are very much more certain to meet this requirement. Apparently it was an endeavor to remove still further the danger of sectional dissatisfaction that led the Monetary Commission to make its one serious departure from sound banking principle in framing its bill. A provision was inserted requiring rediscounts to be made at a uniform rate throughout the entire country, regardless of the wide differences in the demand and supply of capital, which occasion the existing wide differences in lending rates. Under the regional plan no such indefensible provision was found necessary. This important feature of the Federal Reserve Act outweighs such advantages in economy of resources and effectiveness in management as were sacrificed in substituting for a central bank the regional banks.

The Monetary Commission in framing its bill seems to have been guided by two principles generally wise

in legislation — the scope of the measure was limited to the single purpose of removing purely banking defects in our banking system, and no greater departure from existing arrangements was proposed than was essential for the purpose in hand. The Federal Reserve Act certainly runs counter to the first of these principles. Its primary purpose is similar to that of the bill of the Monetary Commission; but a secondary purpose evidently exercised a potent influence. This purpose was to decentralize credits by lessening the concentration of banking funds in a few large banks in the chief financial centers, and especially in New York. The regional system itself gained much support because it was believed by many that it would lessen the financial predominance of New York City. No comprehensive scheme of legislation with this object in view was inserted in the bill; but wherever two or more means of accomplishing the primary purpose of the bill were open, that one was evidently selected which it was believed might tend toward decentralization. In general the desire to decentralize credits explains why the act makes very much greater changes in existing arrangements than were proposed in the bill of the Monetary Commission. In the latter, the practice of depositing a part of the required reserves of the banks with reserve agents was left undisturbed. Under the terms of the Federal Reserve Act, such deposits are to be reduced by successive instalments, and discontinued entirely three years after the passage of the Act. From a purely banking point of view, much can be said for this great change; but it was certainly not absolutely necessary in order to secure the desired improvements in the working of our banking system.

The new banking institutions for which the Federal Reserve Act makes provision cannot be put in success-

ful operation (and in this it resembles the bill of the Monetary Commission) unless a considerable number of the existing banks enter into relations with them. An institution might have been established with large capital, and a monopoly of the right of note issue, authorized to act as government fiscal agent, and to deal with the general public. Such an institution would presumably in the course of time have become a central bank, the main reliance of other banks in emergencies. In order to avoid competition with existing banks, the act provides that the receipt of deposits by the Federal Reserve Banks, and their normal lending operations shall be confined to those banks which subscribe to the capital and maintain balances with them. Obviously, then, if banks in large numbers do not accept the arrangement, subscribing to the capital and relying upon the new banks for accommodation, the system cannot be put into effective operation. Moreover, it is necessary that many banks shall enter the system at the outset. An attitude of hesitation would change to one of positive distrust, if the initial response were inadequate.

In the case of the bill of the Monetary Commission, reliance was placed simply upon the attractiveness of the measure. No bank would have suffered positive loss from failure to enter the system, tho certain slight inducements were held out to those banks which accepted the arrangement at the outset. Whether a sufficient number of banks would have entered that system, if it had been established, may be thought probbable but is not certain. Bankers are naturally and properly a conservative class and the inclination of many would have been to wait until the system was in successful operation. The attitude of bankers toward the Federal Reserve Act while it was passing through Congress was distinctly unfavorable. Most of its

provisions already referred to, as well as others in which it differed from the Monetary Commission bill, were disliked. It was evident that in the absence of positive pressure, the number of banks which would accept its terms would be too small to make successful operation possible. No attempt was made, however, to insert provisions which would bring pressure upon State banking institutions. Perhaps it would be possible, either under the inter-state commerce or the postal clause in the Constitution; but it would have been contrary to the constitutional traditions of the party in power, and it was not necessary. If the national banks very generally enter the system, the resources of the Federal Reserve Banks will be sufficient to test the effectiveness of the measure. Accordingly the Federal Reserve Act contains a number of provisions designed to bring pressure to bear upon these to enter the system immediately. Failure to accept the terms of the act within one year after its passage involves forfeiture of the national charter. This alone would be no great business sacrifice, since banking in most states is quite as profitable under a state as under a national charter. Loss of the national charter, however, involves a loss of the right to issue bank notes and calls for the deposit of lawful money in Washington equivalent to the amount of outstanding circulation. Most national bank notes are secured by two per cent government bonds, the price of which, in the absence of the circulation privilege, would be perhaps about two-thirds of the price (somewhat above par) at which they were purchased by the banks. No considerable number of national banks could refuse to enter the system without involving themselves in a heavy immediate loss. A further provision in the act puts more immediate pressure upon the national banks in reserve cities. If

within sixty days after the passage of the act, a reserve agent bank fails to signify acceptance of its terms, it must cease to exercise the reserve-holding right upon thirty days' notice from the Federal Reserve Board.

Many bankers bitterly condemned the compulsory features in the act while it was on its passage through Congress. This feeling was perfectly natural, but it was not very generally shared outside banking circles. Impartially considered, the act imposes no unreasonable burden upon those who have invested capital in national banks. No one fears the loss of the funds which may be subscribed to the capital stock of the Federal Reserve Banks or placed on deposit with them. If loss should be incurred, it would be primarily due to unsound banking on the part of the boards of directors of the Reserve Banks, a majority of the membership of which is to be chosen by the banks themselves. Some bankers have doubted whether the act would prove an effective measure of banking reform; but few if any have felt that results under its operation could possibly be more unsatisfactory than those under the present system; and all agree that it is a long step toward a perfected system.

II. Organization

The new system is to be organized under the supervision and direction of the "Reserve Bank Organization Committee," consisting of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency. The most important function of this Committee is to determine, "with due regard to the convenience and the customary course of business," the number and area of the Federal reserve districts into which the country is to be divided, and to designate the city in each district in which a Federal Reserve

Bank is to be established. Not less than eight, nor more than twelve districts are to be created. This is a most difficult task. However carefully the initial lines of demarcation may be drawn, more or less modification is to be expected after there has been some experience with the working of the system. Changes in area of districts, and additional districts if the Organization Committee designates less than twelve, may be made at any time in the future by the Federal Reserve Board. While the rivalry of cities may tempt the Committee to start the system with a larger number, it is to be hoped that it will be found feasible to begin with no more than eight or nine districts. The problems which will confront the management of the Federal Reserve Banks are in many respects unlike those with which our bankers have had experience. A somewhat higher average of capacity in the management may more confidently be looked for if the smaller number of banks is established. Moreover, especially at the outset, mere size will contribute not a little to the prestige of the banks, and so inspire public confidence in the new system. A greater variety of occupations in large areas will lessen, tho not much, extremes of seasonal variation in demands for accommodation upon the Federal Reserve Banks. Then too, the task of the Federal Reserve Board in supervising and coördinating the system will be materially simplified, if the minimum rather than the maximum number of federal districts is decided upon.

Within sixty days after the passage of the act, in other words before February 22, 1914, national banks are required, and properly qualified state banks are invited, to signify their acceptance of the terms of the act. Within thirty days after the reserve districts have been designated, each national bank must subscribe to the capital of the Reserve Bank of its district an amount

equal to six per cent of its capital and surplus. One-sixth of this subscription is to be paid at the call of the Organization Committee, another sixth within three months, and still another within six months thereafter. The remaining half of the subscription may be called at any time by the Federal Reserve Board. All these payments are to be made in gold or in gold certificates. It will be observed that the exact time when the system will be established is uncertain. The Organization Committee is only required to designate the reserve districts as soon as is practicable; thirty days is then allowed for the banks to subscribe; and payments will begin sometime thereafter at the call of the Committee. It would hardly seem likely that payments will begin to be called before April or May; and it is hardly to be expected that the Federal Reserve Banks will be ready for business before mid-summer.

After the minimum capital (four million dollars for any Federal Reserve Bank) has been subscribed, the certificate of organization is to be executed by any five member banks designated for the purpose by the Organization Committee. The final duty of the Committee will be to supervise all arrangements for the election of the six of the nine directors of each Federal Reserve Bank, who are to be chosen by the member banks. For electoral purposes the banks of each district are to be divided into three groups — each group to "contain as nearly as may be one-third of the aggregate number of the member banks . . . and as nearly as may be banks of similar capitalization." While the number of banks in each group will be the same, the capitalization will be very different. All the banks with a capitalization above the average in a district will certainly be in one group; those of somewhat less than average capital, in the second group; while the third group will be com-

posed of banks having a very small capitalization. Under this ingenious arrangement, it is evident that the direct influence of the banks of the large cities in selecting the directorates of the Federal Reserve Banks is limited. Local alignements are also avoided. On the other hand, this is not a grouping to which the banks have been accustomed in the past, and therefore there is some uncertainty as to whether at the outset it will be conducive to the selection of capable directorates.

Each group of banks is to choose two directors: a Class A director, who is to be an active banker representing the stockholding banks, and a Class B director, who must be actively engaged in commerce, agriculture, or some other industrial pursuit in his district. The board of directors of each member bank is to elect a district reserve elector. Candidates for the position of director of a federal reserve bank may be nominated by any member bank; but nomination is not necessary. Electors are to signify their first, second, and other choices for one director in each class on a preferential ballot.

In addition to the six directors chosen by the banks, three directors (Class C) are to be appointed by the Federal Reserve Board. Two of these must be persons of "tested banking experience," one to serve as chairman of the board of directors and district reserve agent, the other as deputy chairman and deputy reserve agent. These reserve agents are the official representatives of the Reserve Board, through whom it will exercise its powers of supervision and control over the Reserve Banks. The act contains no provision regarding the officers to whom the operation of the banks will be entrusted. Presumably each board of directors will appoint one of its members (probably one of the Class A directors) as president and manager. The term of

office of all directors is three years, but at the outset they are to be classified so that the term of one director of each of the three classes shall expire annually. The appointment of Class C directors will be the first duty of the Federal Reserve Board; inasmuch as the organization of the system can hardly be completed before the beginning of the summer, the appointment of this board could be deferred until that time. The selection of these directors for each of the eight or more Federal Reserve Banks is, however, no small task in itself; and since public confidence in the new system will largely be based at the outset upon the character of the Federal Reserve Board, its early selection is much to be desired.

The Federal Reserve Board itself is to consist of seven members; the Secretary of the Treasury and the Comptroller of the Currency *ex officio*, and five members appointed by the President of the United States by and with the consent of the Senate. Of the five appointed members, at least two must be persons experienced in banking or finance. Not more than one shall be appointed from any federal reserve district, and due regard is to be given to the different commercial, industrial and geographical divisions of the country. The term of office of the appointed members is ten years; but those first selected are to serve one for two, one for four years, and so on, so that the term of office of one member may expire every two years.

Under this arrangement a majority of the board, in the absence of death and resignation, will never be reconstituted at any one time. Each President will select two of the appointed members: one in the second year of his term of office, and one in the fourth. The Secretary of the Treasury will, of course, be a new member appointed at the beginning of each presidential

term. The term of office of the Comptroller of the Currency is for five years, so that here a variable element is introduced. It may happen that some Presidents will never appoint more than three members during their term of office. Generally, however, each President will appoint four members; but the last appointment, giving a majority on the board, will not be made until his final year of office. Lack of continuity and the possibility of a political board were much greater under the provisions for selecting the Federal Reserve Board which were in the measure at various stages while it was passing through Congress. The arrangements finally adopted would seem to make it reasonably certain that the Federal Reserve Board will be free from both of these defects.

Organization of the system will be complete [1] with the selection of the members of the Federal Advisory Council. This Council is to consist of as many members as there are Federal Reserve districts, the board of directors of each Federal Reserve Bank selecting one member. The function and powers of the Council are purely consultative. It is to meet regularly four times each year at Washington, and at other times there or elsewhere if deemed necessary by the Council itself. It is authorized to confer directly with the Federal Reserve Board, to call for information, and make oral or written representations concerning matters within the jurisdiction of the Federal Reserve Board. It may prove to be an important part of the organization, but this does not seem probable. With a scattered membership and holding regular meetings only at long intervals, it is not to be expected that the Council will be in close touch with the Federal Reserve Board, or in a position to

[1] After the Reserve Banks have been in operation long enough to be running smoothly, not a few branches will doubtless be organized. Branches are to have boards of directors, three of the members of which are to be chosen by the Federal Reserve Board, and four by the directors of the parent Reserve Bank. Branches are to be operated under rules and regulations approved by the Federal Reserve Board.

formulate policies and urge them effectively. From individual members of the Council, the Federal Reserve Board should secure valuable information regarding conditions in different parts of the country; but the work of the Council itself as an organized body seems likely to be of a formal and perfunctory nature. The importance of the Council would doubtless have been measurably increased if the proposal had been adopted that its chairman should sit, even tho without a vote, on the Federal Reserve Board.

III. Capital, Earnings, Deposits of the Federal Reserve Banks

Since the capital stock of each of the Federal Reserve Banks is to be exactly six per cent of the capital and surplus of the member banks in its district, it will always be subject to slight variations. If all national banks enter the system at the outset, the total subscribed capital of the Federal Reserve Banks will be a little more than one hundred million dollars. Subscriptions may perhaps fall somewhat below this amount, since with the exception of the reserve agent banks, no penalty attaches to failure to subscribe until twelve months after the passage of the act. Few state banking institutions will enter the system at the beginning. In many states legislation is necessary to permit them to invest in the stock of the Federal Reserve Banks, and to enable them to count balances with the Federal Reserve Banks as a part of their required reserves. It is to be presumed also, that such institutions, since they can enter at any time, will wait to see whether the system is working to the satisfaction of neighboring national banks.[1]

[1] State banks and trust companies are eligible for membership, if they have a sufficient capital to entitle them to become national banks in the places where they are

There will always be wide differences between the capital and other resources of the various Federal Reserve Banks. Neither the capital nor the resources of existing banks can be made the basis for dividing the country into Federal Reserve districts. Geographical considerations will necessarily require the creation of a number of districts in sparsely settled parts of the country, in which banking resources are comparatively small. No Federal Reserve Bank may, however, be established until it has a subscribed capital stock of at least four million dollars. It would, therefore, seem to follow that the organization committee is precluded from forming any district in which six per cent of the capital and surplus of the national and state banks is less than this minimum amount. There are indeed provisions in the act designed to meet the contingency of failure by banks to subscribe in sufficient numbers to provide a minimum capital; but they would not seem to authorize the organization committee to create districts in which resort to these provisions would be inevitable.[1]

Whether the capital of the Federal Reserve Banks is large or small is a matter of no great importance. Subscriptions to capital provide a comparatively small part of the resources of banks. The capital is an indication that those conducting a bank have something at stake, and is also a margin of safety against loss to depositors. These Federal Reserve Banks are, however, to accept deposits from banks only, and are ordinarily to confine their dealings to the banks. In these

situated. On becoming member banks, they must comply with the provisions of the national banking law regarding reserves, examinations (tho state examinations may be accepted), and various other general provisions of the national banking law.

[1] In case subscriptions by the banks of a district are inadequate, stock is to be offered to the general public; and if the response of the public is inadequate, the stock is to be taken by the government of the United States. Neither privately owned nor government stock is entitled to voting power.

circumstances, there is practically no difference between the funds which the Federal Reserve Banks will secure from member banks in payment of subscriptions to capital stock, and the funds which will be deposited with them by member banks. The depositors are the stockholders and, therefore, there is no separate interest to be protected by a margin of safety.

Shareholders in the Reserve Banks are entitled to a cumulative dividend of six per cent. A limited dividend is obviously wise, since it tends to eliminate the profit-making motive in the management. Whether all the Federal Reserve Banks will regularly earn the six per cent dividend is, of course, not certain; but it seems highly probable, since the danger of serious losses is remote, and interest will presumably not be paid to the member banks on their balances. All earnings in excess of the dividend are to be paid to the government of the United States as a franchise tax; but half of these surplus earnings are to be paid into a surplus fund until it has become forty per cent of the capital stock. Whatever is received by the government from the Federal Reserve Banks is to be used at the discretion of the Secretary of the Treasury, either to increase the gold reserve against United States notes or for the reduction of the interest-bearing debt.

The Federal Reserve Banks will doubtless secure very large resources through the deposit with them of the moneys held in the general fund of the Treasury of the United States, altho no power over the disposition which shall be made of these funds is granted either to the Federal Reserve Banks or to the Federal Reserve Board. Entire discretion remains with the Secretary of the Treasury. He may continue the independent treasury system without change; he may continue to deposit funds with member banks, just as hitherto he

has placed deposits with national banks; and finally he may deposit with any or all of the Federal Reserve Banks, using them as government fiscal agencies. The responsibility of the Secretary of the Treasury is in no way changed. Almost certainly in practice, however, the bulk of the free funds of the government will be placed with the Federal Reserve Banks, and doubtless the opinion of the Federal Reserve Board will determine the distribution of these funds between the various banks.

The lion's share of the cash resources of the Federal Reserve Banks will come from the reserves and working balances deposited with them by member banks. Under the terms of the act, part of the required reserves of member banks *must* be placed with Federal Reserve Banks. This is a novelty in central banking legislation, but is based upon sound principle, and is especially to be commended for this country where, on account of the absence of branch banking, the number of banks to be served by the regional banks will be very great. It makes certain some increase in the resources of the Federal Reserve Banks, along with the expansion of the credit liabilities of the member banks. It also lessens somewhat the danger of unnecessary withdrawals of funds from the Reserve Banks in emergencies.

Reserve requirements of the national banking law are radically changed. In addition to the requirement that a part of the reserve of the banks be kept with the Federal Reserve Banks, the reserve ratio is reduced for all classes of banks; the practice of keeping a part of the reserve of country and reserve city banks with reserve agents is to be discontinued; and a distinction for reserve purposes is made between time and demand deposits. Some of these changes become effective as soon as the new system is established; others are to be

made in a succession of steps and completed three years after the passage of the act.

Time deposits are to comprise deposits payable after thirty days, and are to include certificates of deposit and savings accounts subject to thirty days' notice. A reserve of five per cent is required against these deposits, and no distinction is made between country and city banks. This low reserve requirement will certainly lead the banks to encourage the conversion of demand obligations into time obligations. A relatively large part of the deposits of banks in most European countries is payable at notice. It is obviously an arrangement which shields the banks somewhat from the effects of sudden waves of distrust.

Against demand deposits the ratio of reserves is also to be reduced at once; but the existing classification of banks is to be retained. The required ratio for country banks is reduced from fifteen to twelve per cent, for reserve city banks, from twenty-five to fifteen per cent, and for central reserve city banks from twenty-five to eighteen per cent. A provision in the bill excluding from reserves the five per cent fund held in Washington against outstanding circulation is a slight offset to this reduction in reserve ratios.

As regards the banks in central reserve cities, the initial arrangement regarding the disposition to be made of their reserve is also the final arrangement. They must hold 6/18 of their reserve in vault, 7/18 in their Federal Reserve Bank, and the remaining 5/18 either in vault or with their Federal Reserve Bank. Other banks are allowed a period of transition. Reserve city banks for three years must hold 6/15 of their reserve in vault, thereafter 5/15; for twelve months they must keep with their Federal Reserve Bank 3/15, adding an additional 1/15 every six months; so that at the end of

two years they will have a deposit of 6/15. During the three year period the remainder of the reserve may be deposited with reserve agent banks in a central reserve city, or by what would seem to be an inadvertent extension of existing practice with those in reserve cities; but thereafter it must be either in vault or with a Federal Reserve Bank. Country banks must hold in vault 5/12 of their reserve for three years, thereafter 4/12; for twelve months must deposit with their Federal Reserve Bank 2/12, and an additional 1/12 every six months until 5/12 are deposited at the end of two years. The remainder of the reserve may be kept for three years with reserve agent banks, but at the end of that period must be either in vault or in a Federal Reserve Bank.

Whether these changes in reserves, together with payments by the banks of subscriptions to the capital stock of the Reserve Banks, will make necessary any considerable amount of loan contraction, cannot be precisely determined. If numbers of state banking institutions enter the system at the beginning, some strain may be occasioned, since, altho these requirements are less than those to which the national banks have been subject, they exceed those imposed upon banks by the law of many of the states. In order to enable the banks to avoid contraction, the act contains a provision under which one-half of each instalment of reserve to be placed in reserve banks may be received in the form of the kinds of commercial bills of exchange which the reserve banks may purchase in the open market. It is, however, most unlikely that the banks will be able to make much use of this arrangement, because of the scanty amount of such paper available.[1]

[1] See p. 247 below.

IV. Clearing Functions of the Federal Reserve Banks

It is highly probable that deposits with the Federal Reserve Banks will considerably exceed the amount of reserves which member banks must place with them. Each Reserve Bank is required to receive at par from member banks checks and drafts drawn on any other member bank in its own district. The Reserve Banks are almost certain to become the regular channel through which the banks in any district will collect checks drawn on member banks situated in other places within the same district.[1] The Reserve Banks will presumably organize arrangements similar to those which a few clearing houses, notably those in Boston and in Kansas City, have devised for handling country checks. Much time, very likely years, will be required to work out the details of this system of collections in all of the Federal districts. Many branches will be needed, especially in the districts of large area. Much persuasion and perhaps some pressure will be necessary to induce the banks everywhere to give up present methods of conducting this business. In one respect, the system will be a vast improvement over even the best of the arrangements which have been set up by clearing houses: settlements between the banks will be made by transfers on the books of the Federal Reserve Banks, greatly economizing the use of cash. The banks will certainly find that deposit credits rather than money or notes will be serviceable for most of the

[1] After the city banks lose the reserve balances of country banks, it is doubtful whether they can with profit to themselves continue present collection arrangements. The collection of time items, and demand items on banks which do not enter the system, will require the continuance of many correspondent relationships between banks. Possibly more of this business may be conducted on a commission basis in future.

requirements which will cause them to resort to the Reserve Banks for accommodation.

Similar arrangements may be made through the Federal Reserve Banks for collecting checks drawn on a member bank in one district and deposited with a member bank in another district, but the act does not seem to make this obligatory. A Reserve Bank must receive at par checks and drafts drawn on member banks in its own district if they are deposited with it by other Reserve Banks; but the Reserve Banks are not required to perform this service for member banks. This is a matter which is left to the discretion of the Federal Reserve Board, which is also empowered to clear balances for or to delegate this function to the Reserve Banks. The charges which may be imposed by the Reserve Banks in connection with the transfer of funds and for collections are also to be determined by the Federal Board. Presumably it will be many years before the Reserve Banks will be in a position to undertake the gigantic task of collecting all checks wherever deposited throughout the entire country.

A far-reaching change in the methods of making payments between different parts of the country is certain to be made almost as soon as the new system is established. Checks and drafts drawn by member banks on their own Reserve Bank must be received at par by all other Reserve Banks. Consequently every city in which there is a Reserve Bank will become a par point for the entire country. In the past, New York exchange has been superior to exchange on any other city as a medium for making remittances between different parts of the country. In future exchange on any city which has a Reserve Bank and doubtless also on those having a branch of a Reserve Bank will be equally good. Some of the probable consequences of

this important change may be indicated. Loans by banks in one section to firms or banks in other sections of the country will be greatly facilitated. A slight advance in the rate of discount by one Reserve Bank above that of another may be expected to relieve it from strain, because funds of outside banks will readily flow into its territory. The practice of making commercial paper payable in New York will lose some of its present advantages; consequently, the direct strain on New York will be less considerable than it has been in the past. Finally, it will make comparatively little difference to any member bank whether it belongs to a district containing the cities to which the business of its depositors makes constant remittances necessary.

Each of these various clearing arrangements to be undertaken by the Reserve Banks will obviously make necessary the maintenance of free working balances by member banks with their Reserve Banks. Reserve balances may indeed be used. Quite properly the act contains a specific provision authorizing the use of reserve balances; but doubtless only their exceptional use will be allowed. For exchange purposes in the past, banks have been obliged to maintain large free balances scattered about among banks in many different places. By concentrating much of this business with the Reserve Banks, the average amount of free balances which the banks will require will be materially reduced. Herein, quite as much as in lower reserve requirements, the banks will find that the new legislation makes possible a more economical use of their resources.

V. Federal Reserve Notes and National Bank Notes

The power to issue notes is a useful but not indispensable resource for institutions having the responsibilities which are placed upon the Federal Reserve Banks. The issue of notes by a central bank enables it to supply domestic requirements for currency without reducing its holdings of reserve money. In the absence of the right of issue, it would only be necessary to accumulate in ordinary times a somewhat greater amount of reserve money, to provide for seasonal and emergency needs. General public confidence in the Federal Reserve Banks would, however, be far less secure if they were not empowered to issue notes. This is because of the exaggerated importance almost universally attached to the right of note issue, even in countries in which the check has become a universal medium of payment.

The particular provisions in the act regarding the issue of notes are extremely complicated, and are in some respects quite without precedent. The notes for which provision was made in the bill of the Monetary Commission were to be bank notes pure and simple, subject to a variety of restrictions designed to keep the total amount issued within safe limits. The notes which are to be issued under the provisions of the act are certainly quite as well safeguarded in this respect. In addition, the notes are made obligations of the government of the United States, which also undertakes to redeem them at Washington. The obligation of the government is in addition to and does not take the place of any banking safeguard. It is designed to meet the desires of the very large number of people throughout the country who believe that the issue of

money is a government function. To many bankers and others familiar with our past financial history, this provision in the bill was most distasteful. Their opposition, tho natural, was, however, neither very practical nor reasonable. It was based very largely upon the fear that the government obligation on the notes would prove an entering wedge for an issue of fiat money at some future time. But paper money cannot be issued under the terms of the act for the purpose of meeting government expenditures. Additional legislation would be necessary, and the possibility of such legislation is not appreciably increased by making the notes which are to be issued by the Reserve Banks an obligation of the government. On the other hand, this provision won many friends for this important piece of banking legislation; it allayed opposition which would always have been a serious menace to the permanence of the new system.

The quantity of the new notes which may be issued is wholly within the control of the Federal Reserve Board; but the initiative in taking out circulation rests entirely with the boards of directors of the Reserve Banks. Applications for notes may be made at any time by a Reserve Bank to its district reserve agent, the member of its board of directors who is the medium of communication between the bank and the Board. Rediscounted commercial loans equal in amount to the notes applied for must be deposited with the agent, and a reserve in gold of forty per cent must be maintained. (A reserve of thirty-five per cent in gold or lawful money is required against deposits.) The Board may grant in whole or in part, or reject entirely, applications for notes, and may also impose such interest charge upon the notes as it may deem advisable. The notes are to be a prior lien on the assets of the issu-

ing banks, and there is, therefore, no possibility of loss to note holders, nor any to the government on account of the obligation which it assumes.

Such part of the forty per cent gold reserve against the notes as may be deemed advisable by the Secretary of the Treasury, but in no case less than five per cent, must be deposited in the Treasury of the United States for the redemption of the notes in Washington. Each Reserve Bank is required to redeem not only its own notes but also those of the other Reserve Banks either in gold or in lawful money; redemption in Washington is in gold alone. In practice it is certain that Reserve Banks will redeem the notes in gold over the counter; and it is also certain that slight use will be made of the redemption machinery at Washington. Member banks will certainly deposit the notes with their own Reserve Banks, which are required to accept the notes of other banks at par. The Reserve Banks, in turn, are required under the law to return for redemption the notes issued by other Reserve Banks. Redemption at Washington has apparently been provided because national bank notes are redeemed there in large volume every year; a result of the circumstance that the present number of issuing banks is so large as to make counter redemption much more costly.

Various provisions in the act are evidently designed to keep the issue of notes within safe limits; but not much reliance should be placed upon them. Reserve Banks may not, under penalty of a prohibitive tax of ten per cent, pay out the notes of other Reserve Banks. If these banks, like the Scotch banks, were working in the same territory, regular redemption would check over-issue on the part of any one of them. But under a system of regional banks, each with its own territory, there will be only a very irregular relation between the

amount of notes put out by any one and the amount which will be received by the others. Moreover, it should be borne in mind that regular redemption is no check whatever upon general expansion, either in the form of notes or of deposits, when all banks are expanding credit at the same time.

Not much effect also in checking over-issue is to be looked for from those provisions in the act which require a forty per cent reserve in gold and impose a graduated tax upon reserve deficiencies. A considerable part of the total reserves of the Reserve Banks is certain to be in gold; and deposit liabilities are certain to be vastly greater than those for notes in circulation. The circumstances are hardly conceivable in which a Reserve Bank would not have an amount of gold in its entire reserve ample to provide a gold reserve for such notes as it might issue. The special tax on note reserve deficiency can therefore be readily evaded by shifting the deficiency to the reserve against deposits. Deficient reserves are only allowed when reserve requirements are suspended by the Federal Reserve Board. The Board is to impose a graduated tax on all deficiencies except in the note reserve. On note reserve deficiencies, the tax imposed in the law is to be added to the rate of discount of the reserve banks. The arrangement would seem to be a most unworkable one, since there is no means of knowing to what extent a borrowing bank will have occasion to use the proceeds of its loan in the form of notes. Fortunately this provision of the act is never likely to become operative.

After all, for proper use of the right of issue under the act the main reliance must and should be on wise and experienced management for the Reserve Banks, and above all on a conservative Federal Reserve Board. Restrictions which would make over-issue impossible

would also deprive the right of issue of all usefulness as a means of extending credit. Moreover, the danger of the over-expansion of credit in the form of deposits is vastly greater than it is in the form of bank notes in any country in which deposit credits have become the more important credit medium.

One of the most perplexing questions that presented itself in framing the act was the disposition to be made of the national bank notes and the two per cent government bonds which secure very nearly all of them. When the measure reached the Senate, it contained provisions which contemplated the gradual substitution of Federal Reserve notes for the national bank notes. But when it was pointed out that this would require the Reserve Banks regularly to rediscount at least seven hundred million dollars of commercial paper, in order to support the existing volume of currency, it was felt that some other arrangement must be made. A plan to unify all the varieties of paper money now in circulation, with the exception of the silver certificate, by the issue of an equal amount of United States notes, backed by an ample gold reserve, found influential support; but it was wisely decided to present this in a separate measure. The particular provisions regarding the national bank notes and the bonds contained in the act should be regarded, therefore, as a temporary arrangement pending future legislation.

In order to avoid the contraction of the currency which would follow the refusal of many national banks to enter the system, each Reserve Bank is authorized to purchase bonds and take out circulation similar in all respects to the notes issued by the national banks. After the end of a period of two years, additional bonds may be purchased, but only from member banks, and at the discretion of the Federal Reserve Board. Member

banks desiring to retire circulation and dispose of their bonds, may make application to the Board, which may require the Reserve Banks to purchase them. No more than twenty-five million dollars of bonds may be purchased in any one year, and the amount purchased is to be distributed among the various Reserve Banks in proportion to their capital stock. Bonds thus purchased may be used as a basis for additional national bank notes by the Reserve Banks, or they may be converted into three per cent government obligations, — one-half into thirty-year three per cent bonds, and one-half into one-year three per cent notes both issues without the circulation privilege. In taking the one-year notes, a Reserve Bank enters into an obligation to purchase an equal amount at each successive maturity for thirty years. The purpose of the notes is to provide the Reserve Banks with a readily marketable asset, the sale of which abroad may prove serviceable in periods of strain, and the domestic sale of which will enable the Reserve Banks to make their discount rates effective in the money market. Government short-term obligations are used for these purposes by many of the European central banks.

The existing volume of national bank notes will not be reduced under the terms of the act, except in so far as the Reserve Banks convert two per cent bonds into three per cent bonds or notes. There may even be some slight increase in the total of national bank notes in circulation, since banks may use for this purpose the small quantity of bonds not already absorbed in this way. Little concern, however, need be felt because the national bank notes are not to be retired. Present requirements for money to be used outside the banks are sufficient to absorb all the notes at present; and with the growth in population a somewhat greater quantity could be absorbed in future.

VI. Lending Operations of the Federal Reserve Banks

The normal lending operations of the Federal Reserve Banks are limited to the rediscounting for member banks of commercial loans maturing within ninety days. Commercial loans are generally defined in the act as "notes, drafts and bills of exchange arising out of actual commercial transactions; that is, notes, drafts and bills of exchange issued or drawn for agricultural, industrial or commercial purposes, or the proceeds of which have been used or are to be used for such purposes." The Federal Reserve Board is authorized to define more precisely the nature and character of eligible paper. To make assurance doubly sure, the rediscount of loans secured by stocks and bonds is specifically prohibited. The act also provides that six months' maturities of paper drawn and used for agricultural purposes or based on live stock may be rediscounted.

In confining rediscounts to commercial loans, the act is more stringent than that governing the operations of central banks in Europe. In practice, however, the bulk of the loans of these institutions are in connection with commercial transactions. While this restriction may in some particular emergency hamper the Reserve Banks in giving assistance to some threatened bank, it is upon the whole amply justifiable. Under our banking system in the past the collateral loan has enjoyed a prestige which it is hoped will be transferred to commercial loans. Exclusion of collateral loans from rediscount will certainly contribute much to bring this about. The restriction also gives the public greater confidence that the resources of the Reserve Banks will be generally available throughout the entire country.

One of the reasons which has been advanced for confining rediscounts to commercial loans is based upon certain misconceptions of the true nature of commercial paper, — misconceptions which, if adopted by the management of the Reserve Banks in formulating their policy, may have disastrous consequences. It has been contended on all sides during the last few years that commercial paper was from its very nature liquid; and further, that credit could therefore safely be granted to an extent limited only by the amount of such paper. Both of these contentions are hopelessly fallacious. In an emergency, no kind of loan is liquid to any considerable extent. Business cannot suddenly be deprived of the amount of credit to which it has become adjusted. It is, indeed, often said that loans based upon any commodity entering into general consumption can be quickly liquidated. This can be done as regards any particular loan; but supplies for the immediate and distant future must be in process of production and they will require a new batch of loans. The view that credit can be safely granted to the full extent of merchandise in process of distribution and even in process of manufacture, is equally fallacious. Credit affects price. Liberal discounts may cause speculative advances in commodity prices, stimulating excessive prices by wholesalers, jobbers, and retailers, as well as by speculative holders pure and simple. There is no mechanical or statistical test for the amount of credit which may be safely granted, whether the loans be commercial or collateral. Over-expansion is possible by both operations.

Commercial loans will become the most liquid asset that member banks can hold, simply because they can be rediscounted with the Reserve Banks. A smaller amount of bank funds will be employed in the call loan

market. But whatever amount remains available for that use will be subject to far less seasonal fluctuation both in volume and in rates. The retention of fixed reserve ratios, even tho they may be suspended by the Federal Reserve Board, will probably lead many city banks to use the call loan market to a moderate extent, since it will enable them to avoid the necessity of resorting to the Reserve Banks for rediscounts whenever reserves momentarily drop below legal requirements. A somewhat larger proportion of time loans will doubtless be used in connection with stock exchange dealings; but the available supply of call money will presumably be sufficient to permit the continuance of the present American practice of daily delivery of securities.

At the outset, on account of the widespread prejudice among bankers against rediscounting, the demand for accommodation from the Reserve Banks may not be large; but this prejudice will surely die away in time, and most if not all of the Reserve Banks will suffer from no lack of regular business, except in periods of business depression. Member banks in those parts of the country in which the supply of credit is inadequate for local requirements will lend more closely, while banks which regularly have more funds than can be thus employed will purchase more commercial paper from note brokers and perhaps rediscount for banks in those parts of the country in which rates are normally high.

Aside from the government account, member banks are to provide the funds for the reserve banking system. Competition with member banks would therefore and justly occasion serious dissatisfaction. Managed by boards of directors a majority of the membership of which is to be selected by the member banks, there would seem to be little danger of

serious competition from the Reserve Banks. Nevertheless the act places such restrictions upon dealings by the Reserve Banks with the general public that little or no competition will be possible.

The Reserve Banks are permitted to engage in three kinds of open market operations: (1) dealings in Government securities, and also in obligations of the states and local bodies, maturing within six months and issued in anticipation of taxes; (2) dealings in foreign exchange; and (3) dealings in domestic bills of exchange.

The purchase and sale of government bonds and notes and state and local short-term obligations require no detailed consideration. In periods of inactive demand for rediscounts, investments of this kind will doubtless be made by the Reserve Banks in order to employ surplus funds.

The right to engage in foreign exchange dealings will also be similarly useful, surplus funds being invested in foreign bills. Moreover, if any of the Reserve Banks find that their resources are regularly in excess of domestic requirements, they may be used to facilitate the financing of the foreign trade of the country with domestic capital. It is also very generally believed that the power to engage in foreign exchange operations may be so used that it will be possible to rely upon securing abundant foreign funds in periods of financial strain. This is most unlikely. It is entirely possible for a small country to rely upon holdings of foreign bills as a means of influencing the foreign exchanges, and even for such supplies of gold as may be needed on occasions when confidence is threatened. But the banks of a large country must rely mainly upon domestic resources, since the amount of cash and credit needed in an emergency is too great to be secured from foreign money markets. It should be the policy

of the Reserve Banks to maintain themselves in a condition of such abundant strength as to be wholly independent of foreign assistance. Moreover if they maintain strong reserves in ordinary times, they will not be disturbed on account of gold exports. Gold exports amounting to fifty, or even a hundred million dollars should not be made the occasion for obstructive measures such as are adopted by many of the European central banks. Measures of this kind are generally an indication that the credit structure rests upon an inadequate foundation. New York has been a free gold market in the past, and even under our imperfect banking system, there has always been a sufficient amount of gold for every banking purpose. Moreover, restrictions placed upon gold movements can have but temporary effects; in the long run the distribution of gold among the various commercial countries is determined by fundamental influences which override all such artificial barriers.

The act permits only one kind of banking business between Reserve Banks and the general public. They are allowed to buy and sell to or from individuals, firms, and corporations, as well as domestic and foreign banks, bills of exchange of the kinds which are made eligible for rediscount. The purpose of this provision in the act is to enable the Reserve Banks to secure some employment for their funds when the demand for rediscounts slackens, and to develop a broad discount market. A broad discount market may be developed under the new banking arrangements; but the prediction is ventured that this provision in the act will not contribute to its development and that in general it will be barren of results. It should be observed that the promissory note, the usual borrowing instrument in this country, altho it may be used for rediscounting

purposes, cannot be bought and sold in the open market by the Reserve Banks. Aside from foreign trade, the mercantile bill of exchange, payable at a future date, has largely fallen into disuse in most advanced commercial countries. More and more cash payments are either insisted upon, or are favored by the offer of trade discounts for cash considerably greater than bank discounts. When a purchaser pays cash, obviously a mercantile time bill of exchange cannot come into existence. In European countries, many purchasers who pay at once often draw a bill of exchange on their own bank and, after it has been accepted, discount it in the open market. In this country banks are to be allowed under the act to accept only bills drawn in connection with merchandise exports and imports. Material will, therefore, be lacking for a broad discount market, if its development is dependent upon open market operations by the Reserve Banks.

Fortunately the development of a broad discount market does not require open market operations on their part. A broad discount market is one to which many borrowers resort with full assurance that they will find many lenders. Even under past banking arrangements, many borrowers and lenders have been brought together through note brokers; but owing to the lack of an available supply of cash and credit with which to meet emergencies, this market has been subject to violent perturbations, and at times dealings have been almost entirely discontinued. In the future a solvent borrower will feel more certain that his paper can always be marketed by his note broker; and banks will purchase more largely, since they will prefer to use such paper for rediscounting purposes rather than that of their own regular customers.

VII. Additional Powers of National Banks

Nearly half of the national banks have established savings departments and now hold more than eight hundred millions of savings deposits. This has been a recent development, and one for which there was no specific authority in the national banking law; but under the liberal interpretation of that law by the Comptroller of the Currency in recent years, it has been permitted because it was not forbidden. Many have doubted, however, whether the banks could enforce the thirty and sixty days' notice of the withdrawal of deposits which, following the practice of regular savings banks, appeared on the pass-books issued to depositors. This uncertainty has been removed by implication by the new act, which includes in its definition of time deposits, savings accounts subject to at least thirty days' notice. It is of course a great advantage to the national banks, that in the employment of these deposits they are subject to much less restriction than is imposed upon savings banks in many of the states.

Subject to the permission of the Federal Reserve Board, and when not in contravention of state laws, national banks may act as trustees, executors, administrators, and registrars of stocks and bonds. Many banks will find this a useful extension of their powers. If trust companies may properly engage in banking, there can be no good reason why banks should not undertake trust functions. The department store principle in banking has made rapid headway in most countries in recent years. Under proper supervision every kind of reasonable and safe financial business can be handled by a single institution safely and in a way which is convenient for the business community. In some states legislation may be necessary to permit

national banks to undertake trust functions. In Massachusetts, it seems to be the opinion among lawyers that no legislation is required.

Inability to lend on mortgage security has been the most serious disadvantage experienced by country national banks in competition with state institutions. Land has been by far the best local security available over large parts of the country. Rural bankers have, in fact, taken it into account in making loans and by various devices have succeeded in making it the security for many of the loans which they have granted. Under the Federal Reserve Act all banks, except those in central reserve cities, may lend for periods not exceeding five years twenty-five per cent of their capital and surplus, or one-third of their time deposits, on the security of unencumbered and improved farm land to fifty per cent of its market value.

Two changes are made in the law for the purpose of facilitating financial business with foreign countries. National banks having a capital of at least one million dollars may establish foreign branches, subject to the approval of the Federal Reserve Board, and to such regulations as it may formulate for conducting this business. Banks may also accept bills of exchange maturing within six months drawn in connection with exports and imports of merchandise. These are desirable changes in the law. It is not, however, probable that many foreign branches will be established in the near future, and it is most unlikely that the American acceptance will make rapid headway in foreign markets.

The scope of the following provision in the act is uncertain. "Other than the usual salary or director's fee paid to any officer, director, or employee of a member bank, and other than a reasonable fee paid by said

bank to such officer, director, or employee for services rendered to such bank, no officer, director, employee, or attorney of a member bank shall be a beneficiary of, or receive, directly or indirectly, any fee, commission, gift, or other consideration for or in connection with any transaction or business of the bank." This prohibition obviously covers payments to bank directors and officers in return for aid in securing accommodation from the banks. It may be held that all purchases by a bank of commercial paper from a firm of note brokers, or of securities from a banking house, are forbidden if any of the partners of such firms are on its board of directors. In this event, a few banks would lose valuable directors; but the question of the wisdom of such exclusion is too complex to be given consideration in this paper.[1]

VIII. Supervisory Functions of the Federal Reserve Board

A variety of functions of a supervisory or administrative nature are to be exercised by the Federal Reserve Board. It is to formulate detailed regulations regarding various matters concerning which only general provisions are contained in the act. Among important matters regarding which the Board is to formulate regulations may be mentioned: rules for conducting branch offices; the regulation of state banks which become member banks; rules defining precisely commercial loans eligible for rediscount; and the regulations for the operation of foreign branches. The board

[1] The inability of the Pujo money trust committee to secure desired information from the banks evidently occasioned the following clause: "No bank shall be subject to any visitatorial powers other than such as are authorized by law, or vested in the courts of justice, or such as shall be or shall have been exercised or directed by Congress, or by either House thereof, or by any committee of Congress of either House duly authorized."

is to exercise many supervisory functions over the Reserve Banks which are similar to those which have long been exercised by the Comptroller of the Currency over the national banks. Examination of the Reserve Banks is under its direction. There must be one examination each year, and additional examinations must be ordered upon the application of ten member banks.[1] The Board is also to publish once each week, a statement showing the condition of each Reserve Bank, and a consolidated statement for all these institutions. It is also given a number of important powers to be exercised at its discretion. It may suspend reserve requirements for a period of thirty days, and renew such suspension for successive fifteen day periods. For violations of law, it may suspend the operation of a Reserve Bank, and administer or liquidate it. The Board may also reclassify cities as reserve or central reserve cities, or terminate their designation as such.

The method of banking reform which has now been adopted, necessarily involves placing somewhere enormous power to expand credit. This power cannot be surrounded by sufficient safeguards to prevent all possibility of its misuse, because in so doing, its wise use would be quite as seriously interfered with. Competent management is therefore absolutely essential if satisfactory results are to follow the passage of the Federal Reserve Act. In the operation of the new system, the boards of directors of the Reserve Banks may prove the most important part of the organization; or that place may be occupied by the Federal Reserve Board. The boards of directors will exercise all the ordinary powers of such boards, except in so far as

[1] The law regarding the examination of national banks is recast. The only important changes are that hereafter all examiners are to be paid salaries, and that the Federal Reserve Banks are empowered to conduct special examinations of member banks.

they are subject to control by the Board. All the loans of the Reserve Banks are to be made by the boards of those banks. In this matter, the Board has no power whatever, except that it may require, on the affirmative vote of five members, one Reserve Bank to rediscount paper for others. Here is a power that seems to be designed merely to prevent any working at cross purposes among the Reserve Banks. Few or no occasions for its use will present themselves if all the Reserve Banks are well managed by their own boards. All rates of discount are to be fixed in the first instance by the boards, subject to review and determination by the Federal Board. Here again the decision of the Reserve Bank boards is altogether unlikely to be overruled if these banks are skilfully managed.

The power of the Federal Reserve Board to restrain the Reserve Banks is vastly greater than its power to force them to take positive action which might lead to the inflation of credit. This was clearly the purpose in view in giving the Board the more important of its many powers. It may, for example, reject applications of Reserve Banks for notes, but this will not endanger assets, it will simply lessen power to expand operations. Its power over the discount rates of Reserve Banks will obviously be more effective when used to advance rates which it deems too low than it will be if used to enforce a rate lower than the management approves. The directors of the Reserve Bank would still determine the amount of accommodation which it might safely grant to member banks at the enforced low rate. Officers and directors of Reserve Banks may be removed at any time by the Federal Board, which is merely required to communicate its reasons for removal in writing; but the right of member banks to choose successors will still remain.

While it is impossible to make any prediction as to the relative place which the Reserve Bank directors and the Federal Board will hold, it is evident that, in the absence of harmonious coöperation, the system will not work smoothly, even if it can be made to work at all. If all the Reserve Banks and the Federal Board adopt a wise and conservative policy, the system will surely work well. If the Reserve Banks alone are conservative, the system may work well but with much friction. If the Federal Board alone is conservative, it may force good results from the system. On the other hand, if some of the Reserve Banks and the Federal Board are reckless, the system will probably break down; and if all the Reserve Banks and the Federal Board adopt a reckless policy, the results will be disastrous.

Both the directors of Reserve Banks, and the Federal Board will be confronted with numerous problems, many novel and some intricate. The possibilities of the new system cannot be foreseen, and the extent and nature of the responsibilities resting upon the Reserve Banks cannot be determined beforehand. At the most, only some of the broader lines of policy and some of the more obvious danger signals can be indicated in advance of experience. This is a task which will be attempted in a subsequent paper.

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THE BRITISH SUPER-TAX AND THE DISTRIBUTION OF INCOME

SUMMARY

Earlier estimates of income-distribution, based on imperfect statistics, 256. — Additional information since 1907–09, 257. — Comparison of new data with Pareto's law, 258. — Considerable discontinuity; possible explanation, 260. — Notes: I, Abatements on moderate incomes (up to £700), 262; II, Super-tax yield, 263; III, Pareto's law, 264; IV, Death duty statistics, 266; V, Statistics of earned income, 267.

In 1906 a Committee of the House of Commons examined the method of collection and the statistics of the Income Tax with a view to the possibility of differentiation between earned and unearned income and to the yield of a super-tax on high incomes. In 1909 a super-tax was imposed of 6*d.* per £ on the excess over £3000 of personal incomes exceeding £5000; in 1907 the rate on earned incomes, where total personal income was less than £2000, was reduced to 9*d.*, the ordinary rate being then 1 shilling. In 1909, when the rate on unearned income was raised to 1*s.* 2*d.*, that on the earned incomes of those whose total income was over £2000 and not over £3000 was fixed at 1 shilling.

The evidence given to the Committee [1] proved that the statistics were inadequate for showing what was the total number of income-tax payers, what were the numbers in any grades of income, and what part of income resulted from ownership, what from earnings. It will be interesting to examine after the lapse of seven years, whether any important new light has been thrown on these questions.

[1] House of Commons Paper. No. 365 of 1906.

The reasons for the imperfection of the statistics were as follows. A very great part of the Income Tax is collected "at the source," from interests, dividends, and profits before they are distributed and in a large group of cases from salaries before they are paid. In addition to the income so dealt with, assessments are made on individuals in respect of any other income they are known to receive, and returns are demanded from persons and firms for a statement of any income not already taxed that accrues to them. In general, the Tax Commissioners know only aggregate incomes and numbers of assessments, and not the income of individuals who may each be the subject of several assessments. The Commissioners have never published (it is believed from reasons of expense and administrative difficulty) any special information as to those persons, who for one reason or another fill in returns of total income. Tho incomes are tabulated according to their sources in the Commissioners' reports, it is not possible to distinguish earned from unearned income, since an enormous total is composed of profits from firms where the receipts from use of capital cannot be distinguished from those resulting from personal activities. Further, income from a man's own capital in his own business is regarded as earned. The only definite numbers of persons known were of those who had successfully claimed abatements of tax on the ground that their income was not more than £700; in Note I below these numbers are discussed and it is shown that they were considerably below the numbers who had such incomes.

The statistics of total income and of such fragmentary totals as were available were examined, by various witnesses before the committee, in the light of two other groups of information. The Inhabited House duty

leads to important tables of numbers of houses assessed as of various annual values; and, if the assumption could be made that in general one and only one income-tax payer was to be found at one house, and if any working rule could be made as to the relation of house rent to incomes of various amounts, these tables would show the numbers of incomes at various grades. The "Death duties" lead to detailed tables as to the value of estates left year by year; and, if the ratios of the number of estates (graded by value) existing to one passing, and if the rate of interest on the capital were known, again the distribution of unearned income would be known. Very great difficulty was found in framing the necessary hypotheses and harmonizing the different tables. From them the aggregate of income over £5000 per annum was variously estimated by Sir Henry Primrose as £121,000,000, by Mr. Chiozza Money as £181,000,000, by Mr. T. A. Coglan as £148,000,000, and by the present writer as £200,000,000. The first and last named especially laid emphasis on the extreme uncertainty of their estimates.

In spite of the additional powers of obtaining returns from individuals now exercised by the Commissioners, it still remains true that the total number of income-tax payers is not known, and, except for detailed returns of the super-tax (Note II below), nothing new has been published except the fragments given in Note V. But it has happened that the numbers of abatements claimed on incomes less than £700 have risen, as the change of rates of taxation have offered greater inducements, and as the knowledge of the right to make such claims has spread; so that, as shown in Notes I and III, it is now possible to make an estimate for such incomes with greater certainty. The rest of this paper is based on the assumption that we have adequate knowledge of the

number and amounts of income liable to tax (with or without abatement) between £160 and £700, and over £5000. As regards the latter it is probable that very few persons can receive £5000 from earnings and not very many from interests,[1] etc., without the special commissioners (whose information from the various sources is extensive) suspecting it and requiring them to make a return of their total income.

We have then the following estimates for the fiscal year 1911–12.[2] Number of incomes between £160 and £700 was 880,000 with details for subdivisions. Number of incomes above £5000 was 11,800 and its amount £149,000,000, with details for subdivisions. Total personal income was £810,000,000.[3]

The clearest way to compare these data is by Pareto's law of income distribution, given in Note III. Whatever may be the conclusion as to the general applicability of this law, there can be no doubt that it is of great service in estimating details when gross numbers are known, for interpolating, and for interpretation. In words the law may be put that if the logarithms of the numbers of persons in receipt of incomes *above* a given amount are plotted against the logarithms of the amounts, the points obtained will lie in a straight line. A simple mathematical deduction is that if the logarithms of the numbers of persons whose incomes are

[1] If a man lives in a small house or a flat and receives his income in small amounts from widely distributed sources, it may take a long time for his liability to super-tax to become known.

[2] The amounts included in income taxable in a particular fiscal year, April 1st to March 31st, are in some cases income received in that year, in others the averages of incomes received the previous 3 or 5 years, with many other detailed variations. The effect is that the amount stated for the year 1911–12 corresponds to the actual total of 1910 or 1909.

[3] Taxable income, after exemptions and allowances, but before abatements were made, was £886,500,000. But part of this, estimated as about £50,000,000 by Sir H. Primrose in 1906, is not personal income of persons in the United Kingdom, but belongs to insurance companies, clubs, societies, trust funds, etc., or is paid away to foreigners. A corresponding sum for 1911–12 gives as remainder the total in the text.

of a particular amount (graded equally in £'s or £100's), a straight line is still obtained. This law has been applied separately to the data, for incomes below £700, and to those for incomes above £5000. The result is shown in Diagram I. The gradients of the two

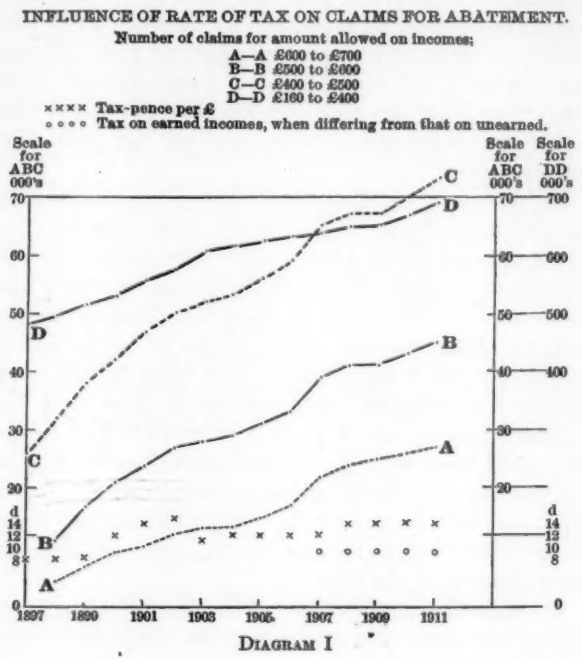

DIAGRAM I

lines are equal, but the lines are not coincident. The law from the upper group suggests twice as many incomes as that for the lower group. The law is well obeyed in the lower group, and in the upper till we come to incomes of about £55,000, above which the law would give a surplus over the facts.

The law for the lower range shows an aggregate income of £251,000,000 for the 880,000 persons with incomes from £160 to £700, and from the data with or without the law a sum very near this must be obtained. Taking this amount in conjunction with the known amount above £5000 and the known total, we find that £414,000,000 is to be accounted for between £700 and £5000. This is very much more than the £142,000,000 that the lower law would give if it were continued, and more even than the £304,000,000 that the upper law would give if continued back, and not far from the two combined.

No complete explanation of this very considerable discontinuity can be given. If we could consider that the number of persons below £700 were grossly underestimated, or that several thousand persons who are liable to super-tax evade it, then the difficulty would tend to disappear; but there seems to be no sound reason for either hypothesis. The legal definition of income for super-tax purposes differs from that for ordinary income tax, *e. g.*, in the treatment of insurance premiums, with the general effect that the higher incomes may be understated relatively to the lower ones, and incomes not much over £5000 may not come in to the super-tax account; but this can only account for a fraction of the total.

A conjecture may be offered on the following lines. There is nothing unreasonable in the supposition that earned incomes follow a law nearly independent of unearned incomes. People with small earnings may be the accidental owners of capital, and people with large capital may also make large earned incomes; but the joint possession of such double incomes, tho quite common, may be regarded as accidental. The fragmentary statistics in Note V suggest that a very con-

siderable part of the incomes below £700 is earned, and the statistics of Note IV suggest that the major part of incomes over £10,000 is unearned. In the region between £700 and £10,000 there must be a large proportion of mixed incomes. It is suggested, then, that the two Pareto gradings tend to represent respectively incomes arising from earnings and incomes arising from property, tho if the lower were purified of property and the upper of earnings, both lines would be lowered and the aggregates would be less. Then in the intermediate region (£700 to £10,000 and more especially to £5000) we should tend to find the aggregate resulting from the two laws, as in fact we do. The upper law gives 212,000 incomes in this region and a much greater number below £700, the lower gives 102,300 in this region; on the hypothesis of mixed incomes these numbers are not independent, and the number of persons is between 200,000 and 300,000.

Whatever be the explanation of the discontinuity, there is certainly presumptive evidence for an aggregation of incomes in this intermediate region of the moderately rich. As to their number, if the average income between £700 and £5000 were £1500, the number would be 280,000; if the average were £2500, it would be 165,000. A number about 200,000 and an average about £2000 seems to fit the facts best.

To summarize this discussion the following table may be given.

ESTIMATES OF PERSONAL TAXABLE[1] INCOME IN THE UNITED KINGDOM

	Number of persons	Aggregate income	
£ 160–£ 700	880,000	£250,000,000	Too small if abatements are not claimed.
£ 700–£5,000	200,000	415,000,000	The number is conjectural.
£5,000 and over	12,000	145,000,000	Too small if there is evasion, or if the difference of definition is numerically important.
	1,100,000	£810,000,000	

[1] Including income subject to abatement.

The general conclusion must be that the statistics arising from the imposition of the super-tax have tended to raise new problems rather than to solve old ones.

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NOTE I

INCOME BETWEEN £160 AND £700[1]

Computed Numbers of Abatements allowed on Incomes of £700 and under (000 omitted)

Range of income	1897[2]	1898	1899	1900	1901	1902	1903	1904
£160–£400 ..	481	496	516	530	555	575	603	613
£400–£500 ..	26	32	38	42	47	50	52	53
£500–£600 ..	..[3]	11	17	21	24	27	28	29
£600–£700 ..	..[3]	4	7	9	10	12	13	13
	—	543	577	601	636	664	696	709

	1905	1906	1907	1908	1909	1910	1911
£160–£400	622	629	638	648	649	669	689
£400–£500	56	59	65	67	67	70	73
£500–£600	31	33	39	41	41	43	45
£600–£700	15	17	22	24	25	26	27
	725	737	764	780	782	808	834

The abatement allowed on incomes not exceeding £400 is £160 throughout the period; thus a person with an income of £390 would pay tax on £230.

In 1897–98 the abatement on £400–£500 was £100; in subsequent years, £150.

The abatements on incomes of £500–£600 and £600–£700 were £120 and £70 from 1898–99.

The tax was 8*d.* in the pound in 1897–98, 1898–99, 1899–00; 1 shilling in 1900–01; 1*s.* 2*d.* in 1901–02; 1*s.* 3*d.* in 1902–03; 11*d.* in 1903–04; 1*s.* in 1904–05, 1905–06, 1906–07; 1*s.* on unearned and 9*d.* on earned income in 1907–08; 1*s.* 2*d.* on unearned and 9*d.* on earned income in 1908–09, till the present date.

[1] 46th and 56th Reports of the Commissioners of the Inland Revenue.

[2] Fiscal year beginning April, 1897.

[3] No abatements on incomes above £500 till 1898–99.

The numbers are obtained by dividing the total amount admitted for abatement in each class by the maximum (£160, £150, £120, or £70) that can be allowed; but in fact it is supposed that some people do not claim the maximum (since it may involve more trouble to claim for the whole amount than for part) and therefore the average divisor is somewhat too large and the numbers too small. Sir H. Primrose (the chairman of the Board of Inland Revenue) in 1906 thought that the deficiency "might be at least as much as" 25,000 (3½ per cent) in 1903–04. For the same date he thought that the addition of 10% to the numbers, for those who were entitled to abatement but did not claim it, would not "be an excessive estimate." He did not, however, commit himself to such large additions.

It is to be noticed that the numbers of abatements, which had shown little movement in the years 1892 to 1897, advanced rapidly as the rate of tax increased to its maximum (1*s.* 3*d.*) in 1902–03; since then the growth in the class under £400 has been only about 2% per annum. A further considerable increase occurred in the numbers in the higher classes when the rate on earned incomes was made 3*d.* and subsequently 5*d.* less than on unearned; in claiming this differentiation it was easy to claim abatement also; but the growth since 1908 has been slight. It seems that the great part of the group who did not claim in 1903 must now be included, and that instead of adding 13% we should add much less, say 6%. The number of incomes between £160 and £700 in 1911–12 was almost certainly between 850,000 and 900,000, and probably near 880,000. This view is confirmed by Pareto's Law of Grading.

NOTE II

SUPER-TAX YIELD [1]

Year of Assessment	Estimated or realised [2] Total Income	Yield of Tax	Number of Persons chargeable
1909–10	£140,100,000	£2,650,000	11,380
1910–11	141,300,000	2,670,000	11,500
1911–12	145,950,000	2,775,000	11,650
1912–13	149,400,000	2,850,000	11,800

[1] 56th Report of the Commissioners.

[2] The numbers for 1909–10 are complete: there were still a small number of returns to come in for subsequent years: thus it is supposed that another 100 persons will have to be added to the next table.

CLASSIFICATION OF INCOMES AND NUMBERS IN 1911–12

Incomes		Total Assessed £000's.	Number of Persons
Exceeding £5,000 but not	£10,000	50,851	7,411
10,000	15,000	24,384	2,029
15,000	20,000	13,550	787
20,000	25,000	9,697	438
25,000	35,000	11,099	382
35,000	45,000	7,303	186
45,000	55,000	5,269	107
55,000	65,000	3,353	56
65,000	75,000	2,576	37
75,000	100,000	4,733	55
100,000		12,177	66
	Totals	144,994	11,554

NOTE III

PARETO'S LAW

Pareto's Law, in its simplest form, is $N = \frac{A}{x^a}$ (I) when N is the number of persons whose income is greater than x units per head; A and a are constants to be determined from the data.

This gives, number at £x is £ $\frac{aA}{x^{a+1}}$ . . (II)

Aggregate income above £x is £ $\frac{Aa}{a-1} \cdot \frac{1}{x^{a-1}}$. (III)

Average income above £x is £ $\frac{a}{a-1}\ x$ (IV)

In the case where $a = 1.5$, average income between £x_1 and x_2

is £ $\frac{3x_1x_2}{x_1+\sqrt{x_1x_2}+x_2}$. (V)

1. If we take 880,000 persons as having incomes between £160 and £700 it is found that $a = 1.5$ gives a good fit and that log A then = 9.3009.

	Number of persons		Calculated Amount of Income in £ millions
	Calculated	Actual Abatements	
£160–400	738,100	689,000	..
400–500	71,100	73,000	..
500–600	42,700	45,000	..
600–700	28,100	27,000	..
£160 to £700	880,000	834,000	£251
£700 to £5000	102,300		142
£5000 and more	5,600		85
Total	988,000		£478

Below £700 the relation between the abatements and numbers is precisely that expected, the defect in the first line being due to non-claiming of the full abatement (Note I). But the income and number above £5000 is too small, and the total income should be £810,000,000 instead of £478,000,000.

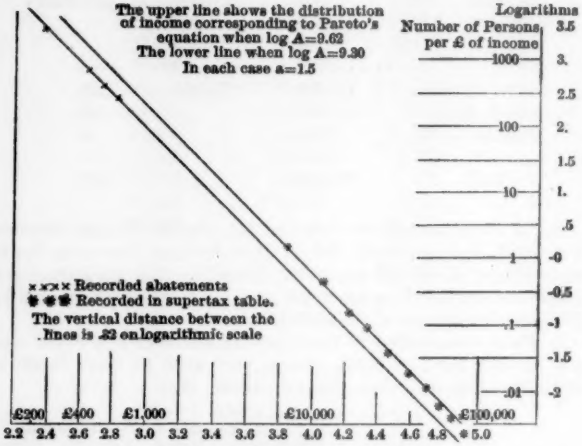
2. From examination of the super-tax statistics it is found that $a = 1.5$ and $\log A = 9.618$ gives a very good fit from £5000 to £55,000 and then gives numbers in excess; thus: —

	Number of Persons		Aggregate Income	
	Calculated	Actual	Calculated	Known
£5,000 to £10,000	7,546	7,411	...	...
10,000 " 15,000	1,890	2,029	...	...
15,000 " 20,000	790	787	...	...
20,000 " 25,000	424	438	...	...
25,000 " 35,000	411	382	...	...
35,000 " 45,000	199	186	...	...
45,000 " 55,000	103	107	...	...
55,000 " 65,000	70	56	...	...
65,000 " 75,000	50	37	...	...
75,000 " 100,000	118	55	...	...
100	83	66	000,000's	
£5,000 and up	11,700	11,554	£166	£145
£ 700–£5,000	212,175		304	
£ 160–£ 700	1,827,000	880,000	514	
Totals	2,051,000		£984	£810

The number below £700 is impossibly large.

Diagram II shows that these dilemmas cannot be escaped, for the vertical heights of marks do not depend on any assumed value

of A, and the horizontal positions (calculated from formula (v) where a is taken to be 1.5) would only be microscopically affected by any other reasonable value of a.



LOGARITHMS OF INCOMES
DIAGRAM II

The more developed form of Pareto's Law, $N=\frac{A}{(x+b)^a}.10^{-cx}$, where b and c are additional small constants, is found, after several trials, not to get over this difficulty.

In the diagram the marks show the numbers of persons *at* each income, whereas it has been usual to show the aggregate numbers *above* an assigned income when this formula has been used. The marks show the actual numbers of abatements, whereas the slant line is drawn for the corrected numbers of incomes.

NOTE IV

DEATH DUTY STATISTICS

Computed from the 56th Report of the Commissioners

Number of estates of various values: —

1. Actual. Average, passing at death, for the years 1907–08 to 1912–13, which is very nearly the same as the number in 1912–13.

2. Calculated. By Pareto's Law, taking the number above £100,000 to be 290 and their average value to be £297,000. Then $a = 1.5$ and $\log A = 9.9624$.

Range			Numbers	
			Actual	Calculated
Over £1,000,000			8½	9
		000's		
£750	to	£1,000	5½	4
500	"	750	12	7½
250	"	500	51	53½
150	"	250	90	85
100	"	150	123	132
75	"	100	138	156
50	"	75	292	371
25	"	50	884	1,503
10	"	25	2,376	6,850

The Law ceases to accord with the facts at about £150,000 capital. This may be connected with the change at about £55,000 in Note III. In both cases the numbers at the higher ranges, of income or of capital, are smaller than would be expected from a study of the lower ranges.

The connection between the capital passing and unearned income taxable teems with difficulties. Thus there are 321 persons paying tax on incomes of over £55,000, but only 9 millionaires dying per annum. Again, full tax is paid on £632,000,000 per annum, and this might be expected to contain only earned income of persons having over £3000 a year; but only £280,000,000 in all passes at death per annum, which is held to correspond to 24 times that sum (*Statistical Journal*, 1908, p. 74), so that reckoning interest at 4½% the income from property would be £280,000,000.

Because of these difficulties, no direct use has been made of these statistics in this paper.

NOTE V

Statistics of "Earned" Income

From 56th Report, Table 93

	Earned Income taxable at 9d.		Unearned Income taxable at 1s.	Total £000,000's
1907–08	188	..	612	799
1908–09	197	..	627	824
		1s.	1s. 2d.	
1909–10	207	7	608	822
1910–11	212	11	615	838
1911–12	221	13	632	866

See Note I for the causes of the different rates of tax.

Owing to various reasons the incomes named do not belong exactly to the fisca years against which they are given. The incomes as given are before abatements are subtracted.

From 52d Report, p. 139, note: repeated in 53d Report. Tax at 9*d*. was allowed in approximately three-quarters of a million cases.

From 56th Report, Table 126. [Corresponding tables are given in previous reports.]

ASSESSMENTS ON INCOMES OF EMPLOYÉS. 1911–12

Range	Number	Amount in £000,000's
£160–400	364,000	112
400–500	29,300	
500–600	14,400	
600–700	8,000	
700–1,000	13,500	11
1,000–2,000	7,700	11
2,000–3,000	1,100	3
3,000–4,000	300	1
4,000–5,000	200	1
5,000 and above	200	2
Totals	438,700	142
FIRMS assessed	54,700	84
PERSONS (not employés) assessed	45,200	111
Grand totals	538,600	£337 million

This table shows the number of personal assessments under Schedules D and E, as distinguished from companies, public loans, etc., and ownership of land and houses and occupation of land.

It is not possible to say what part of the income of persons (not employés) and firms is "earned" and what part is taxed as unearned.

Since firms are formed by different numbers of partners, it is not possib e to give the numbers of persons in them nor any data as to individual incomes.

More assessments than one are frequently made on the same person, if his income arises from various sources.

We cannot then connect in detail Tables 93 and 126, and cannot distribute the earned income by amounts. But it is clear that a considerable part of the £250 millions under £700 is earned.

THE DEVELOPMENT BY COMMISSIONS OF THE PRINCIPLES OF PUBLIC UTILITY VALUATION

SUMMARY

Theories of valuation in process of development by Commissions, 269. — Plant and equipment. "Reproductive" value or original cost? 271. — Treatment of land value; peculiar position of St. Louis and New York Commissions, 274. — Pavements, 279. — Overhead charges; two methods of computing, 281. — Development expense and going values; Wisconsin method and New York method, 284. — Peculiar method in New Jersey, 287. — Conclusion, 291.

THE Supreme Court of the United States has established the principle that a public utility is entitled to a reasonable return upon the fair value of the property being used in the public service, and that the question of such reasonableness is a matter for judicial review. It has failed, however, to formulate any definite principle as to what constitutes the fair value of a property for rate making, other than to point out that certain factors must be given consideration,[1] and to say that the value which should be used as a basis for rates is the value of the property at the time it is being used.[2]

In spite of the indefiniteness in the decisions of the Supreme Court, there are being developed in the United States at the present time well defined precedents and usages in the valuation of public utilities for rate making purposes. Theories of valuation are being developed by the public service commissions, to whom the legislative bodies have delegated the regulatory power.

[1] Smythe v. Ames, 169 U. S. 466.

[2] San Diego Land and Town Co. v. National City, 174 U. S. 739.

It is to the decisions of the commissions which regulate rates that one must look for the development of theories of valuation, in their intricate details and refinements. The purpose of this paper is to describe and compare some of the principles of valuation for rate making purposes developed by some of the leading public utility commissions in the United States.[1]

It is noteworthy that the Massachusetts Board of Gas and Electric Light Commissioners, the oldest rate making commission in the United States,[2] has contributed nothing to the theory of valuation. No specific appropriation has ever been given to the Board for the purpose of making valuations, and no organization has ever been created. Since its organization, the Board, under legislative direction, has imposed restrictions upon the issue of securities. It has been customary to base an estimate as to the amount upon which the company should be permitted a reasonable return, upon the amount of securities which have been approved by the Board or which might have been so approved. Therefore this commission has seldom made valuations, and when it has based a rate to the consumer upon the value of the property, it has failed to indicate the principle by which it arrived at a valuation. But other state and municipal public utility commissions, all of which have been established since 1907, have developed a considerable body of theories and principles of valuation.

[1] The commissions of the various states which possess some powers of regulation of railroads only are not referred to in this paper. Only "public utility commissions" are included, that is, those possessing power over several utilities. The California and Wisconsin Railroad Commissions, herein referred to, have wide powers of regulation of various utilities.

[2] The Massachusetts Railroad Commission was established in 1869, but it cannot fix rates, its powers being only recommendatory. The Board of Gas Commissioners was organized in 1885, and in 1887 was re-organized into the Board of Gas and Electric Light Commissioners.

Plant and Equipment

The general rule is to appraise plant and equipment at its present, or "reproductive," value. This amount is arrived at in various ways, sometimes by a valuation conducted by engineers in the regular employ of the commission, sometimes by the testimony of expert witnesses familiar with the particular business and plant values therein, sometimes by a valuation conducted both by engineers for the company and for the commission. In the two cases last named, the amount often represents a compromise. Whatever the method, the amount accepted is presumed to represent proximately the depreciated value of the plant and equipment owned by the company, at the existing prices of land, labor and materials.

The St. Louis Public Service Commission, however, which has proven itself probably the most efficient and successful municipal commission, employs the original cost theory, and is its leading advocate. In its valuation of the property of the Union Electric Light and Power Company in 1911, the Commission rejected the theory of cost of reproduction, saying that "it disregards the actual conditions under which the property was produced, and sets up a purely hypothetical case." Therefore, instead, the Commission assigned to each item "its original cost in place and ready for service." Again, in its report on the valuation of the United Railways Company, in November, 1912, the St. Louis Commission says "The Commission in its valuation has relied mainly upon original cost as the theory most calculated to bring about a just result. . . . The Commission believes that in trying to determine the amount of property upon which a public service company is entitled to a reasonable return from the public

. . . the circumstances under which that property was created and placed in the public service should be taken into account. This view leads us to the use of the original cost theory where practical. . . ." [1] The method by which the original cost is computed by the Commission is to make a complete detailed inventory of the entire physical property, and then assign to each item its original cost, based upon costs as taken from the contracts in the files of the company, where possible, and when no such contracts are in existence, on estimates collected by the Commission's engineers.

While the New Hampshire Public Service Commission has not yet developed a theory of valuation, it is evident that it regards original cost as an extremely important factor. For in a recent rate case,[2] it held that it was unnecessary to make a valuation of the property, since it was clear that the original cost of the property, less depreciation, was in excess of the amount upon which the company was earning a return.

In rejecting the original cost theory, the Connecticut Public Utility Commission says: "We do not think that the original cost of construction, whatever that may have been, the price paid for the line by the company, are proper standards to determine the value of the plant and equipment for which the company is entitled to receive a fair income, but that the cost of reproduction at the present time in this particular case is a more accurate standard." [3] This reasoning seems to be accepted by the commissions of the following states, all of which base their valuations upon present or reproductive value: California, New Jersey, New

[1] Report on the United Railways Company of St. Louis, by the St. Louis Public Service Commission, 1912, p. 12.

[2] In Brown et al. v. Exeter, Hampshire and Ames Street Railway, Report of New Hampshire Public Service Commission, 1912, p. 139.

[3] First Report, Connecticut Public Utilities Commission, 1912, p. xxxvi.

York, Maryland, and Wisconsin, and also by the Board of Public Utilities of Los Angeles.

Which of these principles is the more nearly just? In the opinion of the author, either is fair, if accompanied by an appropriate return. The rate of return, however, should depend upon which of these methods is adopted. If present value is to be taken, the result is that the company will be called upon to bear the burden of any decrease in the value of its property, and to accept a lessened return because of such depreciation. It is true that the company will also be entitled to the benefit of any appreciation. Yet the amount upon which it may earn a return in the future is indefinite and uncertain. The rate of return should therefore be sufficient to compensate the corporation for assuming this risk. In some cases it may be that the possibility of increased value, due to the ownership of land, will more than offset the possibility of a lessened value of the other property. But land does not ordinarily represent a large portion of the value of municipal utilities, operating in the public highways. Whenever a company is called upon to assume a risk as to the future value which will be placed upon its property, that risk should be given proper consideration in establishing the rate of return to be permitted. If, however, original value is to be applied, then the company will be freed from any risk as to future fluctuations in the value of its property, since the amount upon which it may expect a return is established once and for all. In such case, the rate of return permitted should properly be somewhat less. Theoretically, either method of valuation is fair, if the rate of return is regulated accordingly. Practically, however, the theory of present value is much easier to apply, since but few corporations have records by which to prove the original cost. The repro-

ductive theory also seems much more in harmony with the decisions of the courts.

The rapid increase in the value of land in large cities has given rise to the feeling that the public should not be taxed to give a return to the companies upon increased land values, which, it is argued, have been created by the public. This question presents itself with much more force in the valuation of railways, which own their rights of way, than with the municipal utilities, which simply operate in the public highways. Nevertheless, the question of the proper treatment of land is becoming an important one in the valuation of utilities of the latter kind, since they must own more or less land in order to operate their business.

As a rule, the commissions have followed the same principle in the treatment of land which they employ in the valuation of plant, *i. e.*, valuation at its reproductive value. The Wisconsin Railroad Commission justifies itself in thus permitting the companies to derive the benefit from increases in land values by declaring that such appreciation is of a kind which is regarded as right and proper in other undertakings, and which, therefore, ought not to be denied to public service corporations.[1] With but two known exceptions, all the commissions have followed the Wisconsin practice.

The two commissions which have differentiated in their treatment of land and of physical plant are the St. Louis Commission and the New York First District Commission. Each of them employs a different method and each method is inconsistent with itself. The New York First District Commission adopts the method of including the estimated future increase in land value in the income of the companies, when establishing rates to the consumer. This is justified on the ground that

[1] Wisconsin Railroad Commission Report, vol. iv, p. 579.

"if depreciation is a debit, appreciation is a credit." The Commission points out that it allows on physical property a depreciation rate for the future which is based upon past depreciation. This it makes a charge against income, in establishing a rate which will give a fair return to capital value. It maintains that therefore an estimate of the future appreciation in value of the property should be placed as a credit to the future estimated income. The estimate of future appreciation is to be based upon the past increase in the land values, the average rate of appreciation being secured by subtracting the original cost of the land from its present value and dividing this amount by the number of years. The rate of appreciation, however, is to be estimated in the light of the existing trend of prices. The Commission realizes that this method can give but an estimate of future appreciation, but expresses itself as being willing to grant rehearings in case its estimates do not work out. The Commission says:[1] "If property is to be taken at its depreciated value where it has depreciated, an entry must regularly be made in estimated operating expenses equal to the average annual depreciation. Conversely, if land, or any other property which generally appreciates in value, is to be taken at its appreciated value, then an entry must be made in the estimated receipts equal to the average appreciation. Unless this is done, it is obvious that the consumer will be burdened with all the estimated decreases in assets but not credited with the increases in assets." This theory was also explained at length in a later case, in which the Commission said:[2] "In determining operating expenses, an allowance was made to meet depreciation as a charge against income, for rates should

[1] In re Gas & Electric Rates of the Queens Borough Gas and Electric Company, no. 2, P. S. C., 1st Dist. N. Y., June 23, 1911.

[2] Kings County Lighting Co., no. 2, P. S. C., 1st Dist. N. Y., October 20, 1911.

be such that the consumption of capital may be offset by deductions from income. If these processes are correct, it follows that appreciation should be placed as a credit to the estimated income. It is indisputable that if depreciation is a debit, appreciation is a credit."

The essence of the scheme is to deny to the companies the advantage of increases in land values. If such increases occur, the increase is to be computed as part of income, and thereby to lessen the charges to the consumer. In all fairness and justice, the Commission would, therefore, find itself compelled to follow the reverse principle: if there are decreases in land values, charge them to operating expense, and thereby increase the charges to the consumer. This means, so far as land is concerned, that its value is in reality to be established at its value at the time of the first valuation by the Commission. From that time on, there can be no increase or decrease in its value which will materially affect the company's finances. It is the consumer who is to be affected, advantageously by increases in land value and disadvantageously by decreases in land value.

Apply this principle to a new utility plant. The result is, in effect, that the land value is permanently established at its original value (to the company). True, the land value may increase, and the company will be permitted to earn a return upon the increased valuation. But this will be offset by including in the company's earnings the amount of the increased land value, thereby lessening the amount which the consumers must pay, so that the company is no better off than if its land had not increased in value. Likewise, the land value may diminish, and the company will be permitted a return only upon the diminished valuation. But this seeming loss to the company will be offset by adding it to the operating expenses, above which the

consumers must pay a reasonable return upon the company's property. Therefore, the company is no worse off because of its decreased land values. This plan is a virtual acceptance of the original value theory, if applied to a new utility, or, if applied to a company which is being evaluated for the first time, but which has been operating previously, what might be called " the existing and unchanging valuation."

The inconsistency lies in that the New York First District Commission does not apply such a principle of valuation to other property. Throughout its decisions it appraises the other property on a basis of its present value, *i. e.*, its reproductive value at the time of evalution, which permits fluctuation. In other words, it applies a theory by which, in effect, the value of land may not change, whereas the value of physical plant may.

The St. Louis Commission is also guilty of inconsistency in its treatment of land. This Commission, as already pointed out, employs the original cost principle in appraising the physical plant. Curiously enough, it rejects this principle in its valuation of land, and uses present value. In its valuation of the property of the Union Electric Light and Power Company (1911) the Commission offers no explanation whatever for its differentiation between land and physical equipment aside from the statement that " Inasmuch as the land is used in serving the public, and if not so used could be realized upon by the company at its present value, it seems only fair that this present value should be the basis for estimating the amount of return which the company is entitled to earn." But such a statement, it is obvious, would be equally true of all the other physical property of the company, which the Commission valued at its original cost. In its valuation of the

property of the United Railways Company, in 1912, the Commission again made the same differentiation in the treatment of physical property and land, and offered, as a justification, the fact that "real estate, in American cities at least, is almost certain to rise in value," whereas in the case of buildings and plants "the fluctuations in price are uncertain and generally small and compensating." Therefore, argued the Commission, this rise in the value of real estate was presumably part of the inducement to make the investment, and should be recognized as a legitimate gain of the company.[1] It would seem, however, that the certainty of a great appreciation of real estate in the cities would be sufficient reason why such discrimination should not be made, if the public is to be safeguarded. The inconsistent method of the St. Louis Commission is one which is likely to prove extremely advantageous to utility companies, since the original cost of physical equipment and plant, several years after its purchase, would very often greatly exceed its present value, while the present value of land would generally be much higher than its original cost. The inconsistency of the New York First District Commission is one likely to prove disadvantageous to the companies, since the original cost of urban land, several years after its purchase, would be likely to be much less than its present value, while the present value of physical equipment would often be much less than its original cost. In other words, under the St. Louis plan the utility company has both ends of the stick; under the New York method, both ends of the stick are with the public.

This paper makes no argument for the principle of original cost or for that of present value. As already pointed out, the justice of either depends upon what

[1] Report on the United Railways Company of St. Louis by the St. Louis Public Service Commission, 1912, p. 23.

theory as to a reasonable rate is to be adopted. But whichever principle is applied should be applied consistently. If land is to be valued differently than other physical property, the commission doing so must assume the burden of showing cause for such discrimination. This both the St. Louis and the New York First District Commission have failed to do.

Pavements

The fact that pavements have been laid after the pipe-lines or conduits of utility companies are in the ground gives rise to some questions. In such cases, if the policy of present valuation is adhered to, ought not the value of the plant to be estimated upon a basis of what it would cost to reproduce it under the present conditions, with pavement in the street? It is evident that if this method of appraisal is adopted, valuations will be greatly enhanced. This claim was first advanced by the Consolidated Gas Company of New York, in the well-known "Eighty cent gas case."[1] It has been advocated by utility corporations before several commissions within the past few years, upon the basis of the decision of the United States Supreme Court in the above case. In discussing land valuation, the Court said: "If the property which legally enters into the consideration of the question of rates has increased in value since it was acquired, the company is entitled to the benefit of such increase." But, the Court did not find it necessary in this case to pass upon the claims of the company on pavement valuation, and the commissions have apparently believed that pavements are not "property which legally enters into the question of rates."

[1] Wilcox v. Consolidated Gas Company, 212 U. S. 19.

The Wisconsin Commission refuses to allow any additional valuation for pavement where the company has not paid for it, or incurred any expense for it,[1] altho admitting that expenditures for pavements incurred because of assessments levied by the city, and the cost of cutting pavement in order to lay mains and that of replacing such pavement, are legitimate capital charges. The New York First District Commission takes the same position, saying;[2] "If this theory (inclusion of pavement values) is correct, citizens must consider in connection with every civic improvement its effect upon rates for gas, electricity, telephone service, water, transportation, and every other service which involves the use of the subsurface of the streets. If such improvement increases the cost of reproducing the undertaking supplying the service, higher rates will thereby be justified than would be reasonable before such improvement be made. . . . The cost of reproduction method may be the only method which can be used in some instances, but to follow it to the last extremity in all cases, ignoring all other considerations, not only leads to absurd conclusions, but runs counter to judicial decisions." The New Jersey Commission also refuses to make allowance in valuation for paving "laid subsequent to the installation of the mains, and not paid for by the company."[3] The California Commission[4] refuses to allow any amount "for tearing up and relaying pavement in excess of the amount actually expended therefor." This mode of treatment is also followed by the St. Louis Commission. The author

[1] Ripon Light and Water Company, 1910, Wisconsin Railroad Commission Reports, vol. v, p. 1.

[2] Mayhew v. Kings County Lighting Co., no. 2, P. S. C., 1st Dist. N. Y., decided October 20, 1911.

[3] In the matter of rates of Public Service Gas Co., New Jersey Public Utilities Commission, Reports for 1912, p. 31.

[4] City of Palo Alta v. Palo Alta Gas Co., decided March 12, 1913.

knows of no commission which has allowed an increased valuation to property because of the presence of pavement not in existence when the property was put in place and not paid for by the company. The fact that the commissions have developed a course of action on the subject of allowances for pavements, the reverse of what might naturally be expected as the logical interpretation of the decision in the Consolidated Gas case, is an encouraging indication of the tendency of the commissions to develop independent courses of action, and to decide economic questions not by a blind application of precedent but by independent reasoning. And certainly the attitude of the commissions concerning pavements is sound. To penalize citizens by permitting a higher utility rate because they have decided to tax themselves to lay pavements in their own streets would be a *reductio ad absurdum* of the present value theory.

Overhead Charges

Certain items, usually called overhead charges, should be added to the cost of material and labor in order to get the true valuation of the property. The Maryland Public Service Commission is the one commission which thus far has refused to make any allowance for intangible elements. Altho it has made several valuations of large properties, the most important being the Chesapeake and Potomac Telephone Company of Baltimore and the Consolidated Gas, Electric Light and Power Company of Baltimore, it has included, up to the present, in its valuations nothing but the physical or structural values. But the necessity of allowing for overhead and intangible elements is generally recognized by the other commissions.

Two methods of computing the overhead charges are in use: (1) to compute accurately the expense involved for all overhead purposes; (2) a percentage "allowance" to be added to the structural value.

The first method is that employed by the New York First District Commission. Its basis for estimating the proposed amounts of allowable overhead charges is to add to the physical valuation the following items:[1] (1) Expenses of supervising, engineering, contractor's profit, etc. (2) Expenses of promotion, organization and development of the company. (3) Expenses of interest and taxes during construction. (4) Working capital. All the above are regarded by the Commission as legitimate items to be included in the valuation. The amounts to be allowed are obtained from records as far as possible. When the records are missing, the estimates are based on general knowledge and experience, and an effort is made to arrive at a sum which will represent what was actually spent or might have been expended for these purposes. This practice is also largely followed by the St. Louis Commission, which arrives at its allowance for interest, taxes and insurance during construction, by ascertaining the actual expenditure of the companies as indicated by the companies' books, the tax records, and other available data.

The second method is represented by the practice of the Wisconsin Commission, which generally allows 12% on the reproduction cost to cover overhead charges. In the City of Ripon case[2] the Commission explained that its figure of 12% is made up as follows: 5% for engineering and superintendence; 4% for interest during construction; 3% for organization and legal

[1] Queens Borough Gas & Electric Co., no. 2, P. S. C., 1st Dist. New York, June 23, 1911.

[2] Wisconsin Railroad Commission Reports, vol. v, p. 13.

expenses. The Wisconsin practice of allowing 12% was followed by the New Jersey Commission in its early cases.[1] Recently, however, the New Jersey Commission seems to have adopted a new figure for this purpose, 17.6% which includes engineering, supervision, omissions, contingencies, and interest during construction. This figure appears to be the result of estimates submitted by five different engineering firms, and is accepted as being "the fairest estimate of all these allowances."[2] The percentage method is also followed by the Los Angeles Board of Public Utilities, which includes "the usual 20% above cost, to cover engineering, supervision, interest, and contingencies during construction."[3] The California Commission in railroad valuation cases is accustomed to allow 5% for engineering and organization expenses, 1% for legal expenses, and 6% interest for one-half the period of construction. Where the Commission finds that it may have overlooked items, it allows an additional percentage for contingencies, ranging up to 5%.

In the case of companies which have been recently organized, or which have reliable records and accounts showing past expenditures, doubtless the method of exact computation followed by the New York First District Commission and the St. Louis Commission is the more desirable. Commissions which intend to follow this practice should notify companies in their jurisdiction that all expenditures for such purposes in the future must be properly charged and recorded, if they are to be recognized in valuations. In the case of companies whose expenditures for these purposes extend far back in the past, and which have not records

[1] Report of New Jersey Public Utilities Commission for 1911, p. 109.

[2] Matter of Rates of Public Service Gas Co., Dec. 26, 1912. Third Annual Report of the Board of Public Utilities Commissioners of New Jersey, p. 246.

[3] Los Angeles Board of Public Utilities, First Annual Report, p. 69.

indicating the amounts so expended, doubtless all that can be done is to accept some percentage basis which will give an approximation to amounts properly allowable. It would seem, however, that the commissions might reasonably be expected in the future to evolve some percentage bases for this purpose which will be more nearly uniform.

Development Expense and Going Value

If the corporations are to receive a return which would be only sufficient to attract capital under present conditions, what is to be done regarding the deficit or dearth of adequate returns during the early years of the company's history? Are these not a part of the investment necessary to establish the business? It is evident that unless such losses are in some way to be made up to the companies, private capital for the industries will not continue to be forthcoming. Two methods of dealing with this problem have been adopted: (1) The Wisconsin method, which is to add early deficits and developmental losses to the valuation of the plant. Such losses, therefore, became assets, upon which the consumers are to pay a return permanently. (2) The New York First District Commission's plan, which is to permit the company to charge in later years a rate sufficient to offset the deficiencies below a fair rate in the early years.

The Wisconsin Commission says, in justification of its method;[1] "These early losses . . . represent the cost of the business in very much the same way as that in which the cost of construction represents the cost of the physical plant. One appears to be as legitimate and necessary a part of the cost of the enterprise as the

[1] Wisconsin Railroad Commission Reports, vol. iii, p. 624.

other." The Commission questions whether the New York First District plan, of writing off such amounts by charging them directly to consumers in later years, is equitable, since by this method the charge is shifted from all consumers to a part of them only. It further holds that such an increase in rates is likely to retard "that development of the business which is the chief source for future reductions in rates." The Commission qualifies the application of this principle by recognizing that early deficits can be thus treated only when the conditions under which they were incurred are proper ones.[1] "When such deficits are due to abnormal conditions, or are due to bad management, defective judgment, extravagance, lack of ordinary care or foresight, unduly high capital charges, and other causes of this nature, it is manifestly clear that they should be accorded little or no consideration, in either the valuation or the rates."

Apparently the New Jersey Commission also accepts the principle of adding early losses to the valuation of the property, for in explaining what it means by "going concern value," which it adds to the physical valuation, it says: "It may include the cost of soliciting business, cost of advertising, and also the dearth of adequate returns during the early developmental years of the company."[2] The St. Louis Commission also adopts this principle, and in its valuation of the property of the Union Electric Light and Power Company allowed $1,000,000 for this purpose, saying: "These initial losses . . . are in fact a part of the legitimate investment, and should be permitted into the earning value as a part of the investment."[3] The California Com-

[1] Wisconsin Railroad Reports, vol. iv, p. 585.

[2] New Jersey Public Utilities Commission Reports, 1912, p. 246.

[3] Report of the St. Louis Public Service Commission on rate for light and power, 1911, p. 54.

mission approves of the doctrine that early losses should be recouped to the companies in some way, saying: "That there are certain actual costs incurred in developing the business during its early stages, for which costs the utility is entitled to be reimbursed, . . . seems too obvious for argument." The Commission, however, refuses to adopt *in toto* either the Wisconsin or the New York method, announcing that in its practice "the exact method to be pursued . . . will depend upon the facts in the particular case." As a matter of fact, however, the California Commission is on record as following the Wisconsin practice.[1] In a recent decision the Commission included in the valuation of the property a considerable amount to cover the excess of operating expenses over receipts for the first year and a half after gas was served by the company, and interest for this period on a physical valuation of the property, and other expenses incurred in developing the business.[2]

The objection of the New York First District Commission to this plan appears to be that thereby any close relation between the valuation used for rate making and the actual physical value of the plant may be destroyed. The Commission holds that "the amount included for going concern should be limited to expenditures made prior to the time when operation begins," and that after that, the various expenses which go to make up "going concern" should be charged to operation.[3] If the policy results in losses in the early years, the company should be permitted in later years to charge rates sufficient to offset its deficiencies below a fair return in the early years. The Commission states

[1] City of Palo Alta v. Palo Alta Gas Co., decided March 12, 1913.

[2] Exactly how much the Commission allowed to cover these items it does not state, but from the decision it appears that it was about $8,000.

[3] Queens Borough Gas & Electric Company case, decided June 23, 1911, no. 2, P. S. C., 1st Dist. New York.

that to include such losses in the valuation of the property, or to permit them to be capitalized "is absurd, leading to gross over-capitalization." The Maryland Commission has followed the New York practice, and in some cases where early losses actually occurred it has increased the rates in order gradually to provide for and cover such losses. But in no case has it permitted the inclusion of such losses in the plant valuation.

The Wisconsin practice seems to be the more rational. If the early deficits incurred in order to build up the business represent the cost of the property in the same sense that the investments in material equipment do, then the natural procedure is to add the amount of such deficits to the investment in equipment, the whole to represent the total investment upon which the company is entitled to a return. It is true that to do so means that a return upon these early deficits will be saddled permanently upon the consumers. But if such deficits (assuming them to represent wise expenditure) are a part of the legitimate and necessary investment in the property, this is certainly proper. The New York method brings a discrimination against the present consumers as compared with future ones. Why should the consumers of today be burdened with a higher charge for the purpose of recouping to the company one part of its investment (early losses), any more than they should be burdened with a higher rate to recoup the value of its land or buildings, in order that the consumers of tomorrow may not be required to pay a return upon such part of the investment?

Both the Wisconsin and the New York First District plans contemplate that only the deficits incurred in developing the business shall be made up in some way to the company. An entirely different method of reasoning is applied by the New Jersey Commission,

which holds not only that early deficits should be added to physical value, but that expenditures to get patronage and to develop the business should be included in the valuation, whether or no such expenditures have ever been recouped to the company. This theory is announced in its boldest form in the Public Service Gas case[1] decided Dec. 26, 1912. In this case the Commission announced that it would add about thirty per cent to structural value for "going value," such value to be "largely represented by the cost of developing the business, as distinct from the cost of securing the physical structure." The Commission held, "we see no escape from the necessity of recognizing the intangible property designated as 'going concern value,' as well as actual physical structures similarly obtained, as constituting part of the present lawful possessions of a public utility, even tho both the tangible and the intangible values were built up in the past, out of rates exacted from the consumers. . . . If these high rates in the past have been employed by the company to acquire intangible property in the shape of extensive patronage, that expectation of patronage is theirs, and on its fair value the company is entitled to a return. The 'going concern value' will then be largely represented by the cost of developing the business as distinct from the cost of securing the physical structure." The principle laid down is that this cost of "developing the business" should be added to the value of the physical property, even tho expenditures for this purpose never produced a deficit, or a lack of adequate returns; in fact, quite regardless of what the returns of the company in the past may have been. "The going concern value may include the cost of soliciting business, cost of advertising, cost of inducing

[1] Report of the New Jersey Board of Public Utility Commissioners for 1912, p. 246.

consumers to take service, cost of exhibiting appliances, cost of occasional free installations, etc." In other words, all such expenditures in the past are to be charged to capital account, even tho these expenditures did not intrench upon a fair return. And this is because, "a plant with a business attached has a value greater than the value of the mere plant without the business attached."

This scheme represents, in the purest form, the capitalization, not simply of losses or deficiencies below a fair return, but of expenses. If all expenditures incurred by a company in order to secure and establish its business are to be added to capital value, then practically all expenses must be so treated, for practically every expense is incurred either to get or to hold business. All expenses of doing business are surely expenses incurred in order to hold the patronage, and are therefore responsible for the fact that the plant has a "business attached." The amounts expended for fuel with which to manufacture gas, the salaries of officials, the wages of employees, the cost of materials used, and all other legitimate operating expenses have been incurred either to develop or to hold patronage, and therefore, to "establish a plant with a business attached." For it is evident that if these expenditures were not made, there could not long be any patronage. It is obvious that to charge all operating expenses to capital would be unthinkable. But no differentiation can be made between the cost of getting patronage and the cost of serving the patronage, since without the service the patronage would not continue. Both are, properly, operating expenses.

The error of the New Jersey Commission is due to their unqualified acceptance of the premise "a plant with a business attached has a value greater than the

value of the mere plant without the business attached." This is always true in private business, but in the regulation of public utilities it may or may not be true. If a value in addition to physical value is to be allowed merely because there is a patronage established, it is evident that such value cannot depend upon the rate which the company is permitted to charge, for this in turn must depend upon the valuation allowed. The New Jersey Commission has endeavored to avoid this vicious circle by computing the going value upon the basis of what it actually cost the company to build up its business. But it is evident that if this is to be the basis for going value, then the cost added must be not the gross cost but the net loss, *i. e.*, the deficits or the lack of adequate returns due to developmental expenses. For it is only this amount which measures the *bona fide* investment, the sacrifice made by the owners of the property, in order to build up its business. To add the total expenditures made to develop the business regardless of the earnings which have been made means that all other operating costs incurred in the past, whether reimbursed to the company or not, should likewise be added to plant value: a preposterous proposal.

In rate cases in which the question of development expenses in the past arises, the fair method would be to ascertain whether, if all the amounts claimed to have been so incurred had been charged against operating expenses, the rate of return would have been less than a reasonable one. If not, surely these amounts should not also be added to capital value. And developmental expenses to be incurred in the future should certainly be charged to operating expenses. However, if income is not sufficient to permit these items to be so charged without encroaching upon a fair rate of return,

they should be charged to capital value only until earnings become sufficient to permit the other arrangement.

It is evident from the various methods of valuation herein described that at the present time there are few principles of valuation which are uniformly applied by all the commissions. While each commission regularly applies its own principles, the principles of the various commissions are in conflict. Yet the utility companies, since the movement for the establishment of state utility commissions which really began in 1907, have shown little desire to appeal from the decisions of the commissions to the courts. None the less, it is probable that the Supreme Court will, in the not far distant future, be called upon to definitely decide upon some of these conflicting theories of valuation.

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THE SOCIAL POINT OF VIEW IN ECONOMICS. II

SUMMARY

I. "Public point of view" *v.* "social point of view," 293. — II. Value and the social point of view, 294. — Relativity of value, 296. — Relation to exchange, 297. — Determination of value, 299. — Market *v.* normal value, 303. — Elasticity of demand, 305. — III. Wealth and the social point of view, 306. — The definition of wealth, 308. — IV. Production and capital from the social point of view, 310. — The individualist's concept of production, 311. — False assumptions concerning society, 312. — The "entrepreneur viewpoint," 314. — The technological basis of production, 316. — V. The scientific character of the social-individual point of view, 319.

In the preceding article I raised the question, What is meant by "the social point of view"? The answer was far from simple. Four main concepts of society confront one, with various sub-varieties; while, whatever concept of society is taken, one can look at things either through the eyes of an individual member of that society or from the standpoint of the society as a whole. If one takes the standpoint of society as a whole, one's "social point of view" depends upon whether society is considered as a sum of mechanically related individual atoms, or as an organism dominating the parts, or as a more or less consciously coöperating group of interdependent individuals. In a similar way, if one's "social point of view" be taken to mean that of an individual in his relation to society, it will be very different in case the individual is a self-determined atom, a dependent organ, or a mutually determining and determined member, — independent and dependent. I reached the conclusion that the last is the true concept of

society, and that the most expedient application of this concept is to take the angle of vision of an individual who is a true part of society so conceived. Thus I arrived at the " social-individual point of view."

I. " PUBLIC " *v.* " SOCIAL "

Before taking up the proper burden of this second article, one point must at least be touched upon that might well have been discussed before. This is the relationship between the " public " and the " social " points of view. Now, the meaning of the former lies in the mind of the thinker, but generally the " public point of view " means the point of view of the people of a government, — a nation or other political unit. As everyone knows, a government or a nation is not the same as a society, nor is it so fundamental. To bring out the difference in a concrete way, take the concepts of " public wealth " and " social wealth." By the former expression, the wealth of a government is generally meant, — " public property." The idea of ownership by the collective body of the people of a political group is conveyed. Even if used more broadly, it must mean the wealth of the people of a government. By " social wealth," however, we mean all wealth that is consistent with society, and include part of " private wealth " as well as " public wealth." A more real and living — tho less tangible — relationship forms the basis of society. Society and individual are one in a sense that cannot obtain in government, — unless government and society concide. Perhaps public *v.* private should be the main line of division in " Political Economy " and " *Nationaloekonomie* "; but for the science of economics the distinction between social and individual is more important.

In the following pages, the attempt will be made to make some consistent and practical application of this point of view. It will be applied to some of the chief economic concepts, — value, wealth, capital, etc., — with the purpose of arriving at definitions rationally based and consistently applicable, for such definitions are now all too rare. Incidentally some criticism must be passed upon ideas which the conclusions of this study would supersede.

II. Value and the Social Point of View

First, it may be well to take up the most important economic concept, value. The most obvious question is, What is value? And here, at the very threshold of the analysis one meets the confusion that comes when scientists proceed from different points of view without appreciating the difference. After more than a century of thought and discussion, economists do not agree as to what value is.

The only point of difference I will mention here concerns the relativity of economic value. While a majority of English speaking economists have thought of value as a relative thing or ratio, there are those who consider it to be an absolute thing or positive quantity. For example, a recent writer states the case as follows: —

> The doctrine of relativity has characterized the teachings of the English School, of the Austrian (except Wieser), and of many of the more eclectic followers of each in this country. It will appear later that this relative conception follows naturally from their individualistic method of approaching the subject. The essence of the relative conception of value . . . comes out in the statement . . . that, while there can be a general rise or fall of *prices*, there cannot be a general rise or fall of values. . . . Vastly more than terminology and definition is involved. Is value a quantity or a relation? Is value a thing which determines causally exchange relations, or is

value determined causally by them? To the writer, the former conception seems a logical necessity. Value as merely relative is a thing hanging in the air.[1]

In one thing this statement is clearly correct, namely the fact that the difference finds its origin in the distinction between individualism and societism. But the writer quoted seems not to appreciate that he himself, as a societist of that extreme type which regards society as an organism,[2] may be swinging too far in an opposition to individualism.

Is the logic of the case not as follows? Society, when considered as an organism, would not be concerned with voluntary and self-initiated exchanges among the individuals (?) who compose it. The idea of motivation in an exchange relation, therefore, would not be essential; and, as a result, to the organismic thinker value appears to exist apart from and prior to exchange. It appears to be in a sense absolute. It is thought of as an independent quantity. On the other hand, the individualistic thinker centers his attention upon the relations that arise among freely exchanging independent individuals, and the result is that he deals primarily with exchange values which he considers as entirely relative, — as ratios. The motivation lies entirely in the comparison of net utilities involved in an exchange relation.

But if neither of these points of view can give the truth, and the social-individual standpoint can, let us apply it, to discover the error and the truth. In the first place, individuals are in fact concerned, and anything that will normally motivate economic activity on their part may be considered. They are concerned with exchanges among themselves, in which the relative importance of the things exchanged is the deciding

[1] Anderson, Social Value, pp. 17–18.

[2] See the preceding article, in this Journal, Nov., 1913, p. 124.

factor. This the extreme societist will not see. In the second place, as *social* individuals they appreciate somewhat their interdependence as exchanger and exchangee. In any event, the economist must see that their feelings and desires are in part molded by common experiences and customs, and by imitation, — in short, by social relationships. This the individualist forgets. The conclusion, then, is that values are relative, but that the relativity is not the relativity of unrelated or independent parts. It is a social relativity.

The writer cannot escape the conclusion that in the very nature of things all " values " are essentially relative. In the field of ethics is this not the case ? Right and wrong (ethical values) are involved only when a choice between courses of action is presented, and no absolute quantity of right or wrong exists. So in economics it is not until a choice is presented that one values things. If a good is free, the issue is not presented. If it has absolute utility there is no choice. Between these extremes lies the range of valuations. Furthermore, it appears that the comparison must lie between qualitatively different things or acts. Marginal utility is not value, because there is no choice, but merely a necessary degree of utility fixed by the number of units of a single kind of good. But if comparison of marginal utilities of different goods arises, then we at once enter the realm of value.

This leads to two further criticisms of the organismic thinker's position on value. First, he confuses subjective with objective value; second, he confuses exchange with the conditions that cause exchange. He says that many economists have thought that value is caused by exchange and determined by exchange; and he proceeds to argue that the amount of value is not determined by the particular exchange ratio, and is not

changed every time a new comparison is made.[1] (I believe that no economist ever thought value to be caused by exchange and probably few have thought it determined by exchange, — if for no other reason than that they have made no such distinction. They have often taken the cause for granted, and have proceeded on the correct idea that the conditions that cause exchange are related to those that cause value.)

Roughly, the process of value causation is this. Taking his emotional-volitional state for granted, the individual having a want perceives an object, feels his dependence upon it for the gratification of that want, and imputes utility to the object. More or less consciously, he directs effort towards securing the object and in doing so feels or perceives the limitations of supply. His want thus becomes a desire, and he imputes a degree of utility to a unit of the object. This measures its subjective " worth " to him. Meanwhile, other objects with other degrees of utility have entered his consciousness, and he *cannot escape* a choice and a comparison of their marginal utilities. As a result, he ranges them in a scale, — he values them. But as yet this is all subjective. Now, when he comes into contact with other individuals he finds different subjective worths or degrees of utility imputed to the same objects; but, more than this, he finds these objects are ranged differently in the value scales of other individuals, and in this fact lies the immediate cause of exchange. When the potential advantage of exchange is realized, — and the individual is to that extent socialized — the exchange occurs, and in the process objective value is imputed to the goods concerned as the quality or power of commanding other goods in exchange. Thus, exchange is caused by a realization of differences in sub-

[1] Anderson, above cited, pp. 23–24.

jective values (relative). Exchange value (objective) is caused by the existence of the same differences, but only emerges and becomes determinate in exchange. It is, therefore, equally wrong to say that value is determined by exchange and that value determines exchange; tho the latter is more suggestive of the truth. Value is caused and determined by the conditions that determine the exchange. It emerges in exchange and measures the rate of exchange.

In his natural desire to reach an absolute value, the organismic thinker is prone to confuse utility and value, and to be content with subjective value. Thus, all through the work referred to, statements are made and objections raised concerning what is called "value," but which is really "marginal utility." Thus the author says: "Gold and milk must be, then, commensurable quantities, *i. e.*, must have a common *quality*, present in each in definite quantitative degree, before comparison is possible, or a ratio can emerge. This quality is *value*." [1] This is unexceptionable till we come to the *saltus* by which it is concluded that the quantitative quality is "value." If the vast majority of economists use the term value differently, is it not daring to say that what they call marginal utility shall be called value? Yet that is what the statement just quoted amounts to; for most economists have long agreed that the commensurable quantitative concepts are marginal utilities, but that "values" are relative. No one says — as Professor Anderson seems to think — that value (objective) is a ratio the terms of which are *value* (objective), and just as quantity and mass are the *terms* of weight, so utility and scarcity are the terms of value. [2]

[1] Anderson, Social Value, p. 21. The italics are Professor Anderson's.

[2] Cf. ibid., p. 22. Professor Anderson certainly does a great service in revising our concept of utility and its relation to value, but his work as a whole is vitiated to no small extent by setting up a man of straw, in the shape of value, which is really not value. Upon this straw man he wastes too large a part of his acute criticism.

The analogy with weight, indeed, serves to illustrate the relativity of value and the difference between objective value and subjective value. In weighing, we have the pound weight and the thing weighed, — two different things, but both acted upon by the force of gravity (whatever that may be !). What we seek is a relation between the two. The weight of the thing weighed is this relation, is it not ? If it weighs 2 lbs. it is related to the 1 lb. weight as 2 is to 1. " But," you exclaim, " Why ? Is it not because it has an absolute weight of 2 lbs. ? " The answer must be; No; both weight and thing " weighed " have mass which is acted on by gravity. They are *heavy* — that is all. But weight, as a quasi-value concept, means a relation between the two. Heaviness is like utility; weight is like value.

If economists have differed in their ideas concerning what value is, it goes without saying that their treatment of the determination of value has not been uniform. A marked point of difference, and an occasion of no little inconsistency, appears on the question of the independence of values and prices, that is, the question, Do prices react upon demand and supply in such a way as to make it impossible to say that demand and supply determine value ? This question is also connected with a lack of clarity in the distinction made between normal value and market value. Here, again, it is the writer's conclusion that the trouble lies ultimately in a failure clearly to distinguish between social and individual points of view; and that the remedy is to be found in the clear-cut application of the social-individual concept.

The problem of value as dealt with in economics is a social problem in the sense that values are objective facts which occur in society. There are, however, at

least two extreme and erroneous ways of approaching the problem. The one, starting with the individual, may be called the lonely-individual method; the other, starting with society may be designated as the lost-individual method. The one way, as it were, begins by analyzing society into separate individuals; the other by fusing individuals into society. The one, as we will see, leads to value-determined values; the other to non-measurable absolute values. The explanation is as follows. In beginning with an assumption of a society in which the individuals are lost in and subordinated to an organic entity, a situation is established which has already been pretty clearly indicated. One great unit dominates the valuation process; values are absolute, and are not really expressed in objective exchange value; to the individual they must seem fixed things, made above and in spite of his will. Thus, from the point of view of an individual who is conceived of as a part of an organic society, value (social) determines value (individual). This method of approach, however, has neither been so fully worked out nor so commonly adopted as the individualistic method. In beginning with unrelated individuals, the individual appears as a lonely non-social fragment, acting freely and higgling with other individuals in much the same way that a steer in a herd of stampeded cattle struggles to get on. He does not appreciate the reciprocity of exchange, nor the fact that both parties to an exchange must normally gain or exchange will decline. It is therefore impossible to get the causes of value, for there is no way correctly to put the unrelated individual valuations together to comprise the whole situation.

To the lonely individual, as to the member of an organic society, values (as expressed in prices) appear to be fixed facts with no relation to his own subjective

states of consciousness, whether of utility or sacrifice. His subjective values appear to cut no figure in the situation. He merely buys or sells different physical quantities of this or that material according as "the market" registers a low or high value. Values are *merely* relative, for the interrelations of causal forces are unseen. Exchange seems to be an ultimate thing.

To make the situation, to which this way of approaching the value problem leads, clear, we must observe the assumptions concerning "demand" and "supply" that it involves. We find that by demand is meant quantity demanded at a given price. Price (expressing exchange value) is the determining factor, and demand appears in the shape of quantity of commodities or services, — bushels, bales, tons. The amount of this "demand" is determined by an adjustment of individual demands to a somehow existing market price. The "demand curve" is traced by a series of points which express a relation between price and quantity. On the other hand, "supply" is taken to mean quantity put on the market at a given price. This, too, is determined by price; and the "supply curve" is formed by a series of points which express the relation between price and quantity as formed in the minds of individual sellers. Thus the final upshot is an arithmetic ratio between quantities, and we get an "equation of supply and demand." But why is there any equation at all? Why any price? The question of causation and ultimate determination remain to be answered.

This question leads to an examination of the problem upon the assumption of a conscious-commonness society, when we logically take the social-individual point of view. This way of approaching the value problem is quite different from the preceding. The individual, instead of being lonely or lost, — instead of

being an unrelated and externally determined unit in a mechanical mass of individuals, — is one of an interrelated, mutually determining group. To him, goods and services have certain subjective values based on utility and scarcity, and he acts in accordance with those subjective values. As a result, value is not a fixed environmental fact, but is one which his estimates have had a share in making. The several valuations of the individuals in the group concerned are, as it were, fused, — socialized. Tho *to the individual* it seems that values are determined by forces other than individual valuations, the truth is that they are determined by the valuations of himself and other individuals.

Looking at value in this way, demand is taken to express the totality of the situation presented by the fact that there is a group of individuals who have desires, which, while interrelated in complex ways, differ in intensity and effectiveness.[1] It is based, not on price, but upon desire as modified by purchasing power and volition; and it depends chiefly upon the intensity of desires and amount of purchasing power. Accordingly, the demand curve is determined by points which express a relation between utilities and quantities of material units, *i. e.*, the curve is composed of subjective values. Marshall's term, "demand prices," may be used to designate them. Similarly, supply is that totality of situation presented by a group of different sellers' estimates, or "supply prices." Both demand and supply are independent of price and rest upon fundamental individual values.

Value, then, is determined by demand and supply, — not supply and demand by value, — in that the contemporaneous existence of demanders and suppliers enables us to construct social scales of "demand prices"

[1] The wealth-distribution complication may be ignored for present purposes.

and "supply prices" that are based upon the more ultimate utility and disutility factors.

It will be observed that these schedules or curves of buyers' and sellers' estimates, if true, involve the idea of the social-individual. *The addition of individual buyers and sellers at any point affects the whole situation, no matter how slightly.* All are interdependent, — not atoms.

We are now in a position to answer the queries that arose at the conclusion of the paragraph on value determination from the individualistic point of view. The reason back of market "equations" would appear to be the existence of values which are caused in the way just outlined. Individuals buy on the market when prices are low *because* their individual demand prices are higher than those of the marginal buyers and sellers at the time being. In other words, low prices are prices that are low relatively to normal prices as determined by ultimate demand and supply forces.

The distinction between normal and market values has become entangled with this question of individual and social value, and very frequently one finds that market value is more or less consciously associated with the individualistic point of view. It is in the determination of market value that the circular reasoning which insists that values must be considered in determining values is most often met.[1] Indeed, it is only here that this doctrine is plausible; the reason, as already noted, being that *to the individual* market prices seem to be determined by forces other than individual

[1] In Professor Irving Fisher's Elementary Principles of Economics, which recently reached the writer, he finds the first clear statement of the difference between market demand and what Fisher calls "schedule demand" that he has seen. Fisher's treatment, which is similar to the one used by the writer in his classes for several years, should be generally adopted. Already Professor Davenport has followed him (Economics of Enterprise, p. 49, note). Of course Professor Marshall long ago prepared the way for improved analysis.

valuations, and market fluctuations seem to be due to super-individual conditions. Is it not a relic of individualistic economic thought that leads us to take market prices for granted in discussing the determination of those prices? The real distinction between normal and market value is that the latter is not based upon ultimate forces, and consequently is a point of but temporary equilibrium. The question of ultimate causation is not raised when such market forces as manipulation, port receipts, ginning statistics for the month, etc., are spoken of. The totality of supply and demand conditions is forgotten and attention is fixed upon immediate conditions. It is as if the gaze were centered upon the immediate locality of the intersection of the supply and demand curves, with no regard for the paths by which those curves came to the crossing. The individual buyer is thought of as looking at the price fixed for the marginal pair, and saying, "*At that price*, I'll buy 1000 bales"; and it is forgotten that his demand price for 1000 bales, being higher than the price, was influential in determining the intersection of the curves. When A says he will buy 1000 bales at ten cents, he means that *if* prices should drop to ten cents, they would coincide with his demand price for that quantity. He would then buy because his demand price is no less than sellers' supply prices, not because the price is ten cents. In a similar way, the individual producer who takes price into consideration in putting his goods on the market is merely comparing his individual supply price with the marginal supply price. And all the time price is what it is because the schedules of buyers' and sellers' money estimates (social-individual demand and supply schedules) come to an equilibrium indicating the maximum number of exchanges to be available at that price. Inasmuch as we are not

concerned with ultimate causes when we are discussing so-called market values, it is not impossible to regard the existing price situation as an immediate factor in the determination of ensuing prices. The results will not be incorrect; for we are analyzing correctly what has been built up, and if we work accurately we reach the same destination by the back door. My point is that in so doing we are constructing our demand and supply curves as if the various individual estimates of which they are composed were isolated, and that we are thus reaching no ultimate explanation of value determination.

A clear manifestation of this confusion may be found in the treatment of elasticity of demand. Consistently enough, those writers who take the individual point of view define elasticity in terms of price, calling a demand (quantity demanded) elastic which varies sharply with change in price.[1] On the other hand, some few have seen that the truer concept of elasticity is to be based upon a price-determining factor, supply, and have defined an elastic demand (scale of demand prices) as one in which demand prices vary little with changes in quantity supplied.[2] This definition has been substituted for the less fundamental one by the writer in his teaching with good results on the score of consistency in analysis. Only in this way can the well-known phenomena of elasticity be used in explaining the ultimate determination of demand and value.

Other points might be made concerning value, but the foregoing will suffice. We have found that, when consistently analyzed from a correct point of view, (1)

[1] Taussig, Ely, Seager, Fisher.

[2] Taussig (?), Chapman; e. g., Chapman says: "We say that demand is highly elastic if demand price falls very little as consumption is increased." Outlines of Political Economy, p. 40. Professor Taussig uses elasticity in both senses without noting any difference. Principles, I, 141.

value is relative, being determined by a comparison between the subjective values of things exchanged, but the subjective values are themselves interrelated through the fact that the individuals concerned are parts of the same society. (2) Value is neither determined by exchange nor does it determine exchange in any sense: it measures and expresses an exchange relationship and is determined by the same forces that determine the exchange. (3) Value is not determined by prices either wholly or in part. (4) Market value does not differ from normal value in the kind of forces which determine it, but merely in the breadth of the field and length of time the forces are allowed to work.

III. Wealth and the Social Point of View

All will agree that wealth is the embodiment of economic value. Unembodied values can have no part in the foundation of a science, and consequently economists have striven to gain a material that expresses the quality with which they are concerned in such a shape that it can be worked after the fashion of science. This, I take it, is the significance of specifying "vendible commodities," durable goods, and the like. But, while agreeing that wealth has value, economists have differed (1) in their definitions of value, and (2) in their ideas as to what valuable things it is expedient to include under the wealth concept. In reaching a conclusion concerning the nature of value, therefore, we have gone half the distance necessary to reach a basis of agreement concerning wealth. We must next attempt to determine the true scope of the term "wealth."

In defining wealth it would seem that two broad tests are to be applied: first, is the thing the object of human activity? second, is it measurable? Unless a good is

capable of becoming a motivating element in human choices, and unless its motivating power be measured, it cannot serve us as the material for a science. These two tests we will call the motivation test and the measurability test. Let us apply them.

On the score of motivation, the extreme points of view can be disposed of in a decisive fashion. To the lonely individual anything would seem wealth that would further his separate interests. He is to be thought of as set apart from his fellows and acting without regard to their interests either consciously or unconsciously. Thus, things injurious to them would be included. But such wealth could not be generalized: it would be self-destroying. Moreover, such lonely individuals are not normal, and, as shown in the preceding article, the real individual can only be motivated by the same things that motivate his fellows. So it is with measurement. Lonely individuals do not exchange. Anti-social persons do not proceed in such a way as to balance utilities. Consequently, no economic scales could exist, and there could be no measuring.

From the organismic point of view, the individual is lost. Society being set over the individual, non-individual motives are appealed to, such as altruism, — a procedure which is not only impracticable, but inconsistent in that it appeals to individuals who are supposed to be lost. As to measurement, we find that society is regarded as a unit, so that no free exchange between individuals can exist. Therefore, wealth would not necessarily be exchangeable and consequently not measurable. As a result, we find thinkers who take this point of view including all manner of non-exchangeable things, such as personal qualities, on the ill-defined basis of general usefulness to society. And in accord

with this idea an ethical element is allowed; for if exchangeability and measurability are not required, why not consider well-being and right?

One can hardly escape the conclusion that neither one of these extreme views can serve in a science of economics. Fortunately neither is true, but there is a truth. This truth lies in a motivation that is neither purely individual nor purely non-individual, and one that allows a measurement objectively in society. We must start with the individual; for he alone feels and estimates, and the thing must arouse his activities. But we must put him in society; for individual feelings and estimations are at least modified by custom and imitation, and wants for power and esteem are important motives. We recognize that only individuals desire wealth, but that real individuals are social individuals. We see that in real society wealth must normally be exchangeable on some non-arbitrary basis and not either on the basis of fraud and violence or on the basis of government determination. Thus we are again led to take the social-individual point of view.

In applying this true point of view, it becomes essential to ascertain what the scope of wealth is according to it. To this end, we note that the social individual's economic activity has several phases: he is normally producer, exchanger, sharer in distribution, and consumer. Accordingly, wealth must appeal to him in all these capacities if the science is to be well coördinated. It follows that wealth must have at least four qualities:

1. Utility	for consumption	value.
2. Scarcity	for production	
3. Transferability	for exchange	durability.
4. Appropriability	for distribution	

These four qualities condense into two: value and durability. Thus we arrive at a familiar doctrine, the con-

tribution that is here suggested being that it is reached in a systematic way, and placed upon a scientific basis.

Wealth, so conceived, is both broader and narrower than the individualist's concept. It is broader in that it includes items that are appreciated only in social relations, for such relations involve longer periods of time and wider areas of space than appeal to the mere individual. Things become motives in exchange relation that would not be such to lonely individuals, such as things calculated to win the esteem of one's fellows. It is narrower, however, in that some things are inimical to the broader relations of time and space required by truth, that is, it is somewhat limited by the necessary economy, laws, and morals of society. Even Ricardo wrote: —

"It is true that the man in possession of a scarce commodity is richer if by means of it he can command more of the necessaries and enjoyments of human life; but as the general stock out of which each man's riches are drawn is diminished in quantity by all that any individual takes from it, other men's shares must necessarily be reduced in proportion as this favored individual is able to appropriate a greater quantity himself." [1]

Thus he shows an imperfect realization of part of the idea; the passage intimates that what decreases the ability of others to exchange must in the end react upon the possessor. As men become more civilized they will become more conscious of common interests with their fellows, with the result that they will consider in making their valuations more remote ends and exclude predatory and wasteful agencies.

If we may attempt a definition at this point, it may be said that wealth, as the term is used in economics, means those transferable and appropriable utilities that are valued by men among whom exchange is either free

[1] Principles of Political Economy, Chap. xx (2d ed., p. 344).

or regulated by common consent. That exchange shall be free, — shall be real "exchange," — men must live in accord with the laws and morals of a society, and must act so as to preserve that society. Consciously or unconsciously they must be coöperating.

Several objections at once occur to one. Does this not introduce an ethical and unscientific element? In the first place, it seems to the writer that nothing can be truly scientific that is not true; and if it be true that society and individual are as portrayed, then wealth must be as defined. But more than this, the definition does not make ethical considerations a part of the criteria, but rather it sets up an objective limitation of the field in which the criteria of the definition are to be applied. That which wastes the assets of the group does in fact affect each individual, and those laws and morals which so approve themselves to the common sense of a community as to be generally accepted and binding are objective facts which do in *fact* limit the field of choice.

IV. Production and Capital from the Social Point of View

In the first part of this article, we were chiefly concerned with the organismic concept of value, and the positive significance of the social side of the social-individual point of view was under fire. In the present concluding section, however, the individual aspect will be more directly the object of analysis, and we will be examining the other extreme, — the individualistic way of looking at economic phenomena. It happens that one of the most clear-cut cases of the application of the lonely-individual point of view is to be found in the field of production, the factor of production, capital,

being the center of discussion. It is logical enough to pass from the concept of wealth to capital, for capital is regarded by all as a part of wealth, and owes its existence and value to its power to help produce wealth (including services). Capital being a produced instrument of production, the concept of capital shares in the difficulties of the wealth concept — in a reflected way — and of the production concept.

The writer's conception of the social-individual first came to a head upon reading a brilliant article from the pen of Professor H. J. Davenport,[1] on "Social Productivity *v.* Private Acquisition." Its general thesis may be stated to have been that in economic analysis society and the social point of view count for nothing, the individual for everything. I soon came to the conclusion that this thesis was not sustained, and in formulating my reasons the truth as presented in these papers became clear. It is Professor Davenport's service that he frankly and fearlessly raises the issue between social and individual points of view as held loosely and inconsistently by many economists, and pushes on from the latter point of view to — the bitter end.[2] I can think of no better way conclusively to show the truth of the social-individual point of view than to point out the error in his conclusions.

If Professor Davenport may hereafter be referred to as "the individualist," it seems fair to state that the following assumptions appear as the premises of the individualist's reasoning: (1) Anything that ever changes hands between two individuals, and by which one individual gains — is "marketable at a price" — is wealth, whatever the circumstances. (2) Any activ-

[1] In this Journal, vol. XXV, p. 96 (Nov., 1910).

[2] Sometimes I have wondered if Professor Davenport did not intend his article as a witty *reductio ad absurdum* by which he hoped at last to awaken economists to the haziness and inconsistency of their point of view.

ity that results in securing an income for any individual, whatever the method, is production. (3) Any item of wealth that aids an individual in production so conceived, is capital. (4) To regard wealth, production, and capital in this way makes it unnecessary, unscientific, and impossible to take society into consideration as a determinative factor.

The fairness of this statement of the premises and the error of the conclusions drawn from them will appear from the following analysis of the individualist's reasoning.

We are told that "the test of economic productivity in a competitive society is the fact of private gain, irrespective of any ethical criteria and *unconcerned with any social accountancy*"; and that "neither ethical *nor social* standards are theoretically decisive, or even relevant, for the question of value and marketability and economic productivity."[1] "The test of social welfare is invalid to stamp as unproductive any form of wealth": jimmies being capital, burglary is productive (*sic*). In the assumed competitive regime, monopoly is capital. "Lobbyists, panderers, and abortionists are producers." "But parasitism is not a competitive category," and so is ruled out.

In the first place, what sort of a society, after all, is this "competitive society" so much assumed? Does it mean a society in which each individual is an independent atom, unrelated in its position to others? A society in which the consciousness of each individual is independent and unaffected by any commonness of content with the consciousness of his fellow individuals? One in which imitation plays no part and custom is absent? One in which no one knows that if the other fellow is defrauded, that other fellow will come back at

[1] Davenport, Social Productivity, cited above, p. 113. The italics are mine.

him? In which no one is so intelligent as to realize that by coöperation bigger gains can be secured for all? So it would seem; for under what other assumption could robbery, arson, libel, adulteration be thought of as production? And what a travesty on society! Such an aggregate would be no society, "competitive" or otherwise. If the "facts" which are to demolish the old doctrines are drawn from such a "society" they certainly are "pitiless."

The individualist is inevitably forced into inconsistencies by his pitiless facts. Thus, he bases the productivity of prostitutes, libel writers, lawyers, and fire-bugs upon the assumption that they "do things that men are content to pay for." But it is a pitiless fact that men in society cannot be content to pay for libel and arson. True, in abnormal cases, men may hire others to do these things, and achieve their ends without getting caught; but the law is a fact, is it not? Moreover, what happens if we generalize? Suppose all the individuals in the group were to engage in such "gainful" activities; would the situation not speedily become impossible? The pitiless fact is that gains must come from somewhere. Just as surely as that gains would cease if everybody should quit producing in the good old sense and begin acquiring gain by sinking spices and lobbying, so surely are gains (and individualistic "productivity") reduced by the fact that some people do these things. The antisocial individual cannot be paid out of product without diminishing the total of products and so decreasing the contentment of men to pay for their services.

Perhaps it is some such reflection as the foregoing that leads the individualist to admit that "parasitism" is irrelevant to "competitive doctrine," even while his doctrine is all "competitive" and half his producers live off others.

All this is the result to which the individualist's unconcern for social accounting leads. The fact is that individual and society cannot be separated and a true situation remain, and no more can the individual and the social points of view. To deny any importance to society in determining values is virtually to deny the existence of the individual. A recognition of the individual point of view, so far from making impossible a social point of view, makes it necessary.[1]

From the unsocial reckoning of the lonely individual, proceeds the " entrepreneur point of view " so stressed in the individualist's thought. Thus he would say that everything which, from the entrepreneur point of view, appears as expedient expenditure for the purposes of creating a situation in the market is an outlay of capital which takes rank as a cost of production, — buying city councils, bribing government tariff officials, stifling competition. All these things get into costs in the actual production of commodities, we are told. But let us examine these ideas closely.

In the first place, the brand of entrepreneur assumed is an abnormal and special kind of entrepreneur, and one whom the pitiless logic of law and public opinion is constantly weeding out. He could not be generalized and exist; for he is a parasite, and so, according to the individualist's own reckoning, need not be counted.

In the second place, the question as to *why anything seems expedient* to even such a dubious person is begged. Of course the economists, whom the radical individualist would discredit, would explain that the expediency lies in the fact that, on the one hand, a group of consumers somewhere derive such want gratification from

[1] Professor Davenport says, " That a complete acceptance of this private and acquisitive point of view is the only procedure possible, in the analysis and classification of the phenomena of a society organized upon lines of individual activity for private gain, is abundantly proved as soon as appeal is made to the facts and the processes of the actual business world" (p. 114).

the commodity concerned that they are willing to pay for it; while, on the other hand, the entrepreneur is able to find men who will accept, as compensation for labor and sacrifice in making that same good or rendering the service, something less than the consumers pay. And any question of relative expediency or opportunity is decided by the amount of the margin between income (resting on utility) and expense (resting on scarcity).[1] Just as we found that the lonely individual who is assumed to help in the determination of values by means of values, is a myth born of ultra-individualistic assumptions, so here the lonely entrepreneur individual who is supposed to accept market situations without regard to his fellows is also a myth. The individualist virtually argues that profits determine profits when he says that opportunity for gains, capitalized, is the source of profits. We may grant that it *seems* to the entrepreneur — just as it seemed to the individual seller or buyer — that the existing profit situation is a fixed and determining fact; but this is only superficial and seeming — nothing but lonely individualism. If expediency is to depend upon the sale at a profit of some good to consumers it must posit a demand scale as indicated in the discussion of value, and we at once find ourselves in a complex of interrelated valuations which is inexplicable outside of a group of social individuals.

In the third place, what is cost? In economic questions it is ever the function that decides. So here, — assuming a "competitive reckoning," — costs are practically all human exertions that limit the supply of economic utilities. The only justification of cost is the fact that it limits human exertion in production and

[1] For a critical examination of the individualistic "opportunity-cost" doctrine see my article entitled "Opportunity Cost," in American Economic Review, Vol. ii, pp. 390 ff.

consequently supply. This is merely a question of fact. Now, suppose that an entrepreneur indulges in a little spice sinking, is his exertion cost? The ultra-individualist says yes; I say no. So far, so good. Let us reason out the matter. Has utility been increased? Plainly not, for part now lies at the bottom of the sea. Thus the very basis of production is lacking. "But," he retorts, "the remaining spice sells for a larger sum." Why, I ask. It is scarce, comes the reply. Why, I ask again. Answer: there is a monopoly. So all this fuss is made over a case of monopoly, where a supply fixed at the will of the monopolist is assumed at the start and the marginal demand price is necessarily the determining element. It is a case of monopoly, when we were told that the analysis was to be competitive. Surely enough is said when we note that all the instances of alleged entrepreneur costs are either (1) on a monopolistic basis, or (2) crimes, or (3) frauds. Plain unvarnished pandering is the only exception.

This brings up the question of the necessity of the technological conception of production and capital. The individualist, *by taking values and profits for granted*, is able to convince himself that any increment in value or profits is a source of increased value or profit, respectively, and consequently does not see the need of any technological productivity. His case may be gathered from the following reasoning. He says that the entrepreneur (the significance of whose views we have already noted) would be surprised if he were told that his capital is composed of capital goods like buildings, materials, and machinery. He would include securities, bills receivable, cash, franchise rights, monopoly, government favors, and land. One notes immediately that, in so far as these items are not included under the social view, they are mostly either things whose values are

price-determined or things which are merely representative of capital goods. Franchises and land come in the former class; securities and bills receivable, in the latter. The entrepreneur is more than "perplexed" when both the properties upon which the securities are based and the securities themselves are subjected to taxation!

Not content with setting up these specious cases of alleged non-technological capital, the individualist revives the wine and tree problems of the days of James Mill, in an attempt to show that certain things classed as capital even by economists have no technological significance. For example, he says that ice in an ice house is not a factor of production in an "industrial sense," and is capital merely because it is being held as a source of income. We may agree that the ice is capital, but why? (1) Because men worked and saved to put it in the ice house; (2) because other men will demand it in the summer. Of course the ice is decreasing in weight, but that is a technological incident to an increase in utility, the point being that it does n't decrease as fast as it would outside the ice house. It is one aspect of the cost to the capitalist. The mere holding for increment of gain is nothing causal. Whence the gain? From a surplus of income (utility-based) over expense (cost-scarcity-based).

The social individual would see that the gain is not to be taken for granted, and that consequently he must normally engage in such activities as will yield things that other individuals are willing to pay for. As in each case, we will find that this way of looking at things takes us at once to the truth. In the last analysis, there can be no production in the economic sense without "making" something that appeals to the senses or through the senses of individuals. In order so to appeal, there must be some effect in the nature of a re-

adjustment in the materials of nature, whether it be in space (changing geographical location or form), or time (maintaining bodies intact). Only in this way can the senses be affected and economic utility exist. Any agency or instrument that enables man to make these readjustments more easily and quickly, therefore, has potentialities for production, in that it can increase things which may have utility. Very briefly this is the individual side of the social-individual analysis of production and capital, and on this side lies the foundation of the technological concept of capital.

But it remains to demonstrate why the potentialities just indicated become realized in utilities and values; and to do this we find it necessary to put our individual in a real society. There we find that he becomes dependent upon the wants of fellow individuals for his gain. He must exchange with them and, as Adam Smith shrewdly observed, he cannot count on their benevolence. He must therefore choose only those means of making readjustments in the materials of nature that will create such utilities as he can exchange. In the exchange, values emerge. Thus, we find in the two simple principles (1) necessity of sensation as a means of economic utility and (2) self-interest guidance of the activities of normal individuals, the basis of the technological concept of capital.

The gist of the foregoing points may be summed up as follows. (1) There is practically no production or capital without exchange; and exchange can be truly understood only in a true society in which individuals are not entirely lonely, but act and react upon one another so as to make the one out of the many — without losing the one. (2) Human activities and agencies are divided into two great groups, the social and the anti-social, or "predatory"; while the social may be sub-

divided into the positive-social and the negative-social, or "acquisative."[1] (3) The necessity of society and the true nature of social relations make predatory activities and agencies unproductive in a true and scientific sense. (4) The "entrepreneur viewpoint" when in conflict with the social-individual point of view is unsound; for: (*a*) the entrepreneur also depends upon society, (*b*) and his "lonely" estimates are mere seemings of no causal significance. (5) The significance of costs in economics is that they (*a*) function in production and (*b*) limit supply; but "entrepreneur costs," so-called, have no such significance. (6) The technological concept of production and capital cannot be abandoned, because *utility* depends upon adjustments in materials; but values in society direct the technological process.[2]

V. The Scientific Character of the Social-Individual Point of View

Finally, we must consider the question, Is the social point of view so full of ethics and optimism and unreality that it cannot be used for scientific purposes? It may be granted at once, that, if the individual is to be thought of as an unsocial or lonely individual, he will necessarily regard the interests of society as separate from and often clashing with his own, with the consequence that, for him, to take the social point of view would involve an ethical choice. But a true social point of view, being based upon a true concept of society, is not that of such an individual, and consequently loses its ethical character. It merely begs the question

[1] Anti-social activities may be divided into the merely "parasitic" and the destructive.

[2] This conclusion does not lead us to materialism, for utility is the decisive thing, and not all adjustments have utility. Utility sanctions costs. The old ideas on this subject need correction, but not the extreme reaction to the subjective or the unsubstantial.

to link "social" with "wholesome," "deserving," "welfare," "duty." The social point of view, as I have taken it, does not concern what ought to be. It merely stands for a fact, the fact that individuals lose significance apart from society. It is based on what individuals do, not on what they should do.

So it is with optimism. To be sure, the social individual need not, like the lonely individual, be a pessimist; but that fact no more makes him an optimist than it makes one jubilant not to be miserable. It is the individual who is lost in the social organism who is optimistic! But the question is asked, do economists who profess the social point of view not consider that all gainful occupations are socially productive, else they could not normally be privately gainful? And is this not optimism? In answer, it is to be explained that only *socially* gainful occupations would be held to be socially productive (in the sense indicated on a preceding page); and that the word "normally" makes a great difference. What could not exist in the long run, and is *tending* to cease to exist, may nevertheless exist at any given time. The fact is that the social point of view of a social-individual leads neither to optimism nor to pessimism, for it proceeds from a recognition of the interrelation of individual interests, — interests which are different, but coördinate.

After this extended discussion, I cannot believe it necessary to devote much space to proving the unreality of any other than the social point of view as truly interpreted. Society is as real as the individual, — and, of course, no more real. This being the case, it is as unreal as anything imaginable to overlook the following facts: To rob is to take without giving, and cannot persist in a competitive exchange economy. To burn cotton or sink spices means wasted utilities and dimin-

ished product. To tax both farms and factories, on the one hand, and mortgages and bonds, on the other hand, is double taxation. To own real estate is a very different matter from owning any kind of (other ?) capital. To hold special privileges by graft is more precarious than to hold land. To be a prostitute may be productive; to be a beggar, however, is non-productive; while to be a thief or incendiary is predatory and destructive. The reality of these things is overlooked by the adherents of the lonely-individual point of view, not by economists who have recognized the importance of society.

In order to have a science we must have measurable quantities. In order to measure we must compare, which, in economics, means free exchange. Thus, we get objective values. But exchange values are only possible in society, and society has been proved to be an interdependent group of individuals. Therefore, the social point of view must be taken if we are to have a science. *Economics as a science of scarcity values is based upon a social point of view, made true to life by recognizing its expression in individual valuations and activities.* The social point of view means, not ethics, not art, not utopian hypotheses, but, on the contrary, it means a scientific recognition of the cold indisputable facts that inasmuch as individuals live in society (1) they must and do make their valuations and acts in view of their posterity and the longer life of the group, and (2) they must and do make their valuations and acts in view of the greater scope of the reactions caused within the group and the different supply limitations. In short, to the individual, time and space and value are what they are partly because society is.

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SOME ECONOMIC ASPECTS OF THE NEW LONG AND SHORT HAUL CLAUSE [1]

SUMMARY

Early interpretation of this clause, 323. — I. Cases in which relief is granted; the general policy, 325. — Roundabout lines, 327. — Cross-lines, 328. — Market competition, 330. — The parallel of a protective tariff, 332. — II. Extent of relief granted, 333. — Recent trans-continental rate cases, 334. — The zone method criticised, 335. — Conclusion: the margin of tolerance and the Commission's ideal, 336.

WHEN a statute has been suddenly revived after a sleep of twenty years, we cannot help wondering whether it has, like Rip Van Winkle, been much changed in the interval. In the early days of struggle for existence, the Interstate Commerce Commission was waging a losing fight in the mere attempt to give to the "long and short haul clause" some meaning and force. Now it feels free to give the clause what meaning and force it will, subject only to constitutional limitations and to the guiding principles of reasonableness expressed in the statute.[2] Then as now, the Commission had power in special cases to permit any carrier to charge less for a longer haul, and to "prescribe the extent to which such designated common carrier may be relieved from the operation of the section." But whereas at present this power to relieve is the central fact of the fourth section, previous to 1910 it was from force of circumstances a dead letter.

[1] For a general survey, see Ripley, Railroads: Rates and Regulation, pp. 473 ff., 564–566, and chap. xix. The present study is more limited in scope, paying especial attention to the cases of 1912–13.

[2] R. R. Com. of Nev. v. S. P. Co., 21 I. C. C. R. 329, 340.

No sooner was the act of 1887 in operation than many carriers took the ground that competition of any sort at the more distant point was a substantially dissimilar circumstance, and entitled them, not to relief in the discretion of the Commission, but to complete exemption. If this sweeping claim could be made good, no special relief need be asked for, since all the cases in which it could be of moment, or in which there was any great probability of its being granted, would be already taken out of the hands of the Commission entirely. So the question of authority had first to be fought out. In defending its jurisdiction the Commission became more uncompromising than at the outset as to what were "substantially similar circumstances." It held, for purposes of giving vitality to the act, that nothing but competition of water carriers or of rail carriers not subject to the act could remove any rate from its operation,[1] tho in the first case heard it had conceded that the roads might be entitled to exemption "in rare and peculiar cases of competition between railroads which are subject to the statute, when a strict application of the general rule of the statute would be destructive of legitimate competition."[2]

Whether or not this change of front was a wise tactical move, it probably had little effect on the outcome. In any case it is hard to see how the power to grant partial relief could have been anything but a dead letter in the incongruous setting of the original fourth section. The power could not be exercised arbitrarily, without reason given, for then the Commission would be open to the charge of exercising legislative powers which Congress could not constitutionally delegate to it. Only as it should follow the general rules of the act

[1] R. R. Com. v. Clyde S. S. Co., 5 I. C. C. R. 324. Reviewed in 21 I. C. C. R. 414.

[2] In re L. & N. R. R. Co., 1 I. C. C. R. 31.

with regard to reasonableness and undue preference would it be acting clearly within its powers as an administrative body. But if some carriers were to be relieved wholly or in part from the operation of a section which applied to all alike, what reasonable ground could possibly be shown for doing so, other than some difference in the "circumstances and conditions" surrounding the long and short haul in those cases in which relief was granted? If such difference were not admitted to be "substantial," it could hardly furnish reasonable ground for relief. But to admit that the difference was "substantial" would seem equivalent to admitting at once that this was a case to which the clause did not apply at all.

It seems clear that the Commission could never have succeeded in prescribing the degree of relief to be allowed, even if it had made good its claim that the clause applied to cases of competition between domestic railways. This claim, however, the Supreme Court refused to sustain.[1] A final attempt was made to prescribe the degree of relief to be granted in cases where circumstances were admittedly dissimilar, but the Commission was again overruled.[2] The first chapter was thus closed.

From this brief survey, one conclusion should stand out clearly. The original attitude of the Commission was not radical nor uncompromising. The rigid attitude commonly ascribed to it was wrought out under stress of combat, and expressed the Commission's ideas of the legal necessities of the struggle for jurisdiction, not a settled economic policy that would be followed out, once the fight for jurisdiction should be won.

[1] I. C. C. v. Alabama Midland Ry. Co., 168 U. S. 144.

[2] E. T. V. & G. Ry. Co. v. I. C. C., 181 U. S. 1.

I. Cases in which Relief is Granted

In fact, the effect of the amendment of 1910 has not been by any means to establish a rigid long and short haul policy for all cases in which the discrimination is due to competition of carriers subject to the act. In the general statements with which the Commission signalized the reviving of the fourth section, it went back to the tone of its very first decisions, made nearly a quarter of a century previous, before the opening of the struggle with the courts. It proposed to grant relief in situations beyond the carriers' control — in difficulties that he has not brought upon himself by his own competitive policy. "If at the more distant point it finds a competition to which it must conform under the imperious law of competition, if it would participate in traffic to that point, it may discriminate against the intermediate point without violating the law, provided it establishes such necessity before the Commission." [1]

The passage quoted sounds very like the "rare and peculiar cases" phrase of the original Louisville & Nashville decision.[2] Indeed the "rare and peculiar" case dealt with in this early ruling is the type of the most important class of exceptions granted in consideration of railroad competition under the new act; namely that of roundabout railroad lines which are in competition with more direct routes. These it is the settled policy of the Commission to relieve from the operation of the fourth section, provided always that the short line bases its charges on distance, and that the rates to intermediate points on the roundabout line are shown to be in themselves reasonable.[3]

[1] R. R. Com. of Nev. v. S. P. Co., 21 I. C. C. R. 341.

[2] In re L. & N. R. R. Co., 1 I. C. C. R. 31, 81.

[3] Wright Wire Co. et al. v. P. & L. E. R. R. Co. et al., 21 I. C. C. R. 64; In re Rates on Salt, 24 I. C. C. R. 192, 195, and other cases.

This might seem to make a rather large breach in the barrier of prohibition that was intended to be "well-nigh universal," but no one familiar with the history of the question will be surprised. The Commissioners are only following the original policy of their predecessors; they are in accord with foreign practice, and with a sound "cost" theory of charges. The essential thing, under such a theory, is that each locality should get the benefit of its location, as measured in the actual relative costs of carriage. The circuitous route is, of course, ordinarily the more expensive, especially as the Commission has tentatively defined a circuitous route for this purpose as one at least 15 per cent longer than the direct line.[1] This is by no means a fixed rule, however; other disabilities than distance might have the same effect, even if the distance were the same.[2] The decisive thing is an economic disadvantage of some sort, that would of itself justify higher rates than those of the stronger (usually shorter) line. In view of more complex situations to come, the writer begs the reader's patience in a brief review of the economics of this simple and familiar case.[3]

An intermediate point (C in diagram) on the longer route has a right to a reasonable joint rate through the common junction and on by the direct line (CAB), if it is so near the common junction that this is the least expensive way for the carriers to haul the goods. This means a rate higher than the junction pays by an amount approaching the local charges for the haul AC.

To this rate, C is entitled on a cost basis and as a result of its location, no matter how the traffic moves;

[1] In re Rates on Salt, 24 I. C. C. R. 192, 195. Edwards & Bradford Lumber Co. v. C. B. & Q. R. R., 25 I. C. C. R. 93.

[2] In re Rates on Salt, 24 I. C. C. R. 192, 196. In re Lumber Rates, 25 I. C. C. R. 61. Grand Junct. Chamber of Com. v. D. & R. G. R. R. Co., 23 I. C. C. R. 115.

[3] For a fuller discussion, going into some aspects of the situation not treated here, see Ripley, Railroads: Rates and Regulation, pp. 219 ff.

and it is not entitled on a cost basis to any lower rate. If the route *CAB* were owned by one company and *CDB* by another, there would be no question raised of the fairness of the adjustment of charges. Why then

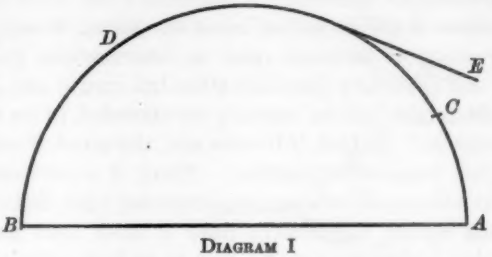

DIAGRAM I

should the principles of justice, as based on cost, turn a somersault if we suppose the stretch of track *AC* has been sold by one company to the other? In a closed circuit of this sort, the cost principle demands that to any terminus the economic mid-point should pay the highest rate, and it is only by chance that this mid-point could be identical with a junction of the lines of two separate companies.

Now if the roundabout route chooses to compete for traffic between the common termini, so long as this does not result in unduly low rates from *A* to *B* direct (the Commission requires the direct line to observe the fourth section), it is a matter purely between the two companies, injuring no one, unless it results in wasteful carriage. This latter aspect is not to be neglected;[1] but such bidding for roundabout hauls is not likely to be very prevalent unless there is some unused capacity which can be employed at slight additional expense, so that the possible waste of the roundabout haul is not necessarily as great as would appear from a glance at

[1] See Ripley, op. cit., chap. viii.

the map. If the direct line is unable to carry all the traffic between its termini, the roundabout haul becomes the cheapest way to handle the surplus and avoid congestion; a condition which occurs, to be sure, only intermittently.

But even if the short line is not congested, to compel the granting of terminal rates to intermediate points would not prevent a discrimination but create one, and one that might just as logically be extended to an outside point *E*. In fact, if it were not, the point *E* would have just cause of complaint. Thus, if a territory is divided into zones whose rates increase with distance, and one carrier happens to have a route that passes through a higher zone on the way to or from points in a zone of lower charges, it would not simplify matters to compel that carrier to observe the fourth section.[1]

Another interesting case is that of the independent cross-line forming the base of an isosceles triangle or one side of a rectangle, and able to divert in either direction through freight from its own local stations — the type of a large class of problems with which Professor Ripley has made us familiar.[2] A case of this sort has been settled, not on the ground of preventing waste in roundabout carriage, but, like the general case of the circuitous route, on the sole basis of giving each station the benefit of the shortest route available by which its traffic *might* move. Carthage Junction[3] is farther from various Ohio River crossings than are the points on either side of it, and it pays a higher rate. This is upheld, even tho "it often happens . . . that this carrier, . . . for purposes and reasons of its own, desires to haul traffic which originates west of Carthage Junction through Carthage Junction east to a connec-

[1] In re Lumber Rates, 25 I. C. C. R. 50.

[2] Op. cit., pp. 282 ff.

[3] In re Lumber Rates, 25 I. C. C. R. 50, 56.

tion with the Louisville & Nashville at Harriman or the Southern Railway at Emory Gap, and conversely, it might desire to handle traffic originating to the east of Carthage Junction through that point west to a connection with the Louisville & Nashville at Nashville or Clarksville, or the Illinois Central at Hopkinsville. In

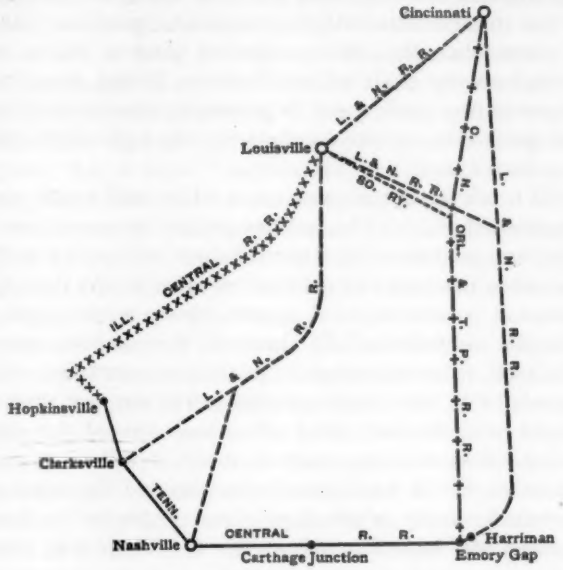

DIAGRAM II.

either case the traffic would pass through a point taking a higher rate than the point of origin."

The Commission holds, in granting relief from the fourth section, that so long as the "rates are manifestly constructed upon the proper plan . . . it is entirely immaterial to the shippers upon that line whether traffic is handled by the Tennessee Central through its

eastern or its western junctions." [1] The opinion in the case gives no hint whether the " purposes and reasons of its own " which give rise to the practice complained of are matters of transportation convenience, such as the balancing of its eastward and westward tonnage so as to reduce the haulage of empty cars, or whether they are concerned with getting the most favorable division of the through rate with the connecting carriers. But it seems plain that the question at issue is not to be settled on the basis which Professor Ripley suggests, of preventing roundabout shipments at lower rates than are granted to points on the way, through which the shipments pass.

So much for the circumstances which will justify the granting of relief. The fact has already been mentioned that competition with other railroads will not of itself furnish a basis for the granting of relief to the shortest line, nor to any other of approximately equal length.[2] Market competition falls almost in the same category. By itself, it is not enough to justify departure from the general rule, tho the Commission will not say that it could never do so.[3] The writer may hazard the conjecture that when exception is made, it will be to preserve the life of established industries and the value of invested capital which have been protected so long against the superior advantages of others that they have acquired a " vested interest " in such protection.

The Commission argues, however, that if carriers make an extra low through rate to put Kansas salt into St. Louis in competition with salt from Michigan, the carriers of the Michigan salt could retaliate with equal justice,[4] and there would be no logical limit. " This

[1] Cf. Ripley, op. cit., pp. 295, 296.
[2] 24 I. C. C. R. 192, 25 I. C. C. R. 61.
[3] In re Lumber Rates, 25 I. C. C. R. 50, 59.
[4] In re Rates on Salt, 24 I. C. C. R. 192.

form of discrimination is one which feeds upon itself, . . . and it ought to be snuffed out in its infancy before property rights and commercial conditions have intervened to render the thing aimed at difficult of accomplishment." [1] It seems here to be implied that if another case of this same sort were to arise, in which the practice was not attacked until after property rights had grown up, the answer might be different.

While agreeing entirely with the general view of the Commission, the writer has had some questionings as to the logical consistency of the policy. If we accept the idea that market competition may be something more than a mere "euphemism for railroad policy," [2] we may draw some interesting comparisons. If the actual cost of making goods and carrying them to St. Louis from the east is less than from the west, but if the western carrier makes an extra low rate, low enough to meet the eastern competition, it is not at once obvious how this weak-line competition differs in principle from that of a roundabout route against a direct one joining the same termini. And if the western road makes the rate to St. Louis lower than to nearby intermediate points, have these points been robbed of anything to which their geographical situation entitled them? By the terms of the problem, the lowest actual cost at which the goods can be made and laid down at their doors is more than the same goods need cost laid down at St. Louis.

But the assumptions (expressed and implied) on which this case rests are such as would prove in practice both elusive and unstable. To ascertain with accuracy the point at which the combined cost of making and laying down the goods is the same from the east as

[1] In re Lumber Rates, 25 I. C. C. R. 50, 60. See also Bluefield Shippers Assoc. v. N. & W. R. Co., 22 I. C. C. R. 519, 525.

[2] 21 I. C. C. R. 367.

from the west, we must know the relative costs of production at the different sources of supply, and must make allowance as well for any differences in quality which might enable one producer's goods to make way against another's even at a higher price. And if we were to base a rate policy on our findings, we ought to be sure that these relative costs and qualities would not change in the future. For if the western producers should become enough more efficient, the whole argument would fall to the ground, and the case become one of obvious discrimination in favor of St. Louis and against the intermediate points. Such justice totters on a narrow pedestal. We should also make sure that the financial situation of the railway will not change, for if it does, the road may find itself no longer anxious to carry the traffic in question at such low rates, and yet unable to alter its policy without damage to "vested interests."

The essential difference between the two kinds of competition shows itself in facts like these. In any case like the one just described, capital and labor are being supported in a relatively unproductive locality, while in the competition of routes, so long as the rates of the strongest route are not twisted out of a reasonable adjustment, no industry is affected save the railroads themselves. And if the roundabout line should decide to cease bidding for competitive traffic, or to let part of it go, that is an affair between the traffic manager and his superiors, making no essential difference to anyone outside.

Railroad systems, like nations, are prone to protect their own infant industries;[1] but the regulator who

[1] The writer has elsewhere discussed more fully the parallel between railway rate theory and the theory of international trade. Columbia Univ. Studies, vol. 37, no. 1, pp. 125–135. The discussion of Commissioner Meyer's paper at the last session of the American Economic Association (held since the above was written) shows that economists recognise the fundamental identity of principle involved.

seeks a nation's welfare is like an economist with a world-inclusive outlook viewing a protective tariff. He concedes it justifiable in certain cases, but he is likely to conclude that out of the great array of protected industries, the infants whose special nurture has repaid its cost are few and far between. Hence the fact that the Commission will not allow market competition, if unsupported by special considerations, to justify lower charges for the longer haul, may be regarded as a salutary check, making somewhat more expensive a policy which is likely in any case to be carried beyond the limits of gain for the country at large.

II. Extent of Relief Granted

It is in the exercise of its discretion to decide the degree and kind of relief to be granted that the most interesting questions arise, for the burden of proof is on the carrier to justify the rates he wishes to charge. "It must be affirmatively shown by the carrier seeking such exception that injustice will not be done to intermediate points by allowing lower rates at the more distant points."[1] This is a return to the principle of the Cullom Report of 1886, which proposed that a greater charge for a shorter distance should be "presumptive evidence of unjust discrimination."

As to the extent of the Commissioners' discretion, they have maintained that confiscation is the only limit.[2] They may fix a maximum difference between the rates of the two points in question, or a minimum rate at the farther point (a rare thing in rate regulation). They may "define the territory from which a higher intermediate charge may be made," or fix a maximum rate at the intermediate point. In fact, they may

[1] R. R. Com. of Nev. v. S. P. Co., 21 I. C. C. R. 341.

[2] R. R. Com. of Nev. v. S. P. Co., 21 I. C. C. R. 329, 340.

limit the discrimination "in any way that is definite and certain."[1] Within the limits set, it would seem that the Commissioners have a freer hand to work out their own ideas of relative reasonableness than ever before.

By far the most striking rulings have been in the cases dealing with the rates from the eastern and central section to points near the Pacific coast. The questions at issue and the general features of the decisions are now familiar. On account of water competition, the rates from the eastern coast are highest to points some distance inland, and lower to Pacific ports. When the carriers serving Chicago and other points in the eastern half of the continent began the policy of putting these cities on a par with the seaports in competition for the western markets, they took the rates as they found them, discriminations and all. Under these rates, producers west of the Alleghenies have come to do more and more of the business, until now most of the traffic paying the rates is not subject to water competition that would of itself account for the discrimination.[2] It seems to have been true, however, that the ocean carriers did reach inland and draw cargoes to the Pacific coast via the Atlantic from as far west, at times, as Chicago, often themselves "absorbing" the cost of the eastward haul. The Commission met this situation[3] by dividing the country into zones, one where water competition admittedly has full force, one where it has no force, and two intermediate zones where its effect is weak or intermittent. The amount by which the intermediate rates in question might exceed the through charges was limited to 25 per cent from the eastern zone, 15 per cent

[1] City of Spokane v. N. P. Ry. Co., 21 I. C. C. R. 400, 415.

[2] R. R. Com. of Nev. v. So. Pac. Co. et al., 19 I. C. C. R. 238, 247-251.

[3] Intermountain Rate Case, 21 I. C. C. R. 355. City of Spokane v. N. P. Ry. Co., 21 I. C. C. R. 400, 423.

from the next, 7 per cent from the next and none from the zone farthest west.

At first sight the ruling seems logical. Yet here also disturbing questionings arise which make one doubt if this will prove a permanent solution of the problem. Indeed the Commission can hardly be said to regard it as such, since it held that it would be within its rights in refusing relief to all but the seaboard zone, as it had not been affirmatively shown that the coast-to-coast rates were unreasonably low in themselves if applied to the haul from the inland zones to the intermountain region. Such being the case, and the law placing the burden of proof on the carriers to establish the reasonableness of their intermediate charges, the Commission could legally have lowered all the intermediate rates to the level of those granted to the seaports. The fact that they gave the permission to charge more, represented an attempt to be "extremely conservative in this, the first application of the new law." [1] Regarded as an attempt to set up the exact reasonable charge to the intermountain region (of which no pretense is made), the decision would surely be open to the objection raised by the Commerce Court in enjoining it,[2] namely, that the Commissioners cannot say whether the intermediate rates chargeable under their order are absolutely reasonable or not, for they do not know what those rates will be. Apparently, the Commission assumed that the coast-to-coast through rates would go no lower than they were at the time — a bold assumption in view of all the possibilities of the Panama Canal. If the decision had used percentages of the coast-to-coast rates as they stood at the time, its position might have been unassailable. Possibly the Commission had in mind its experience with the Texas Commission, in which its at-

[1] R. R. Com. of Nev. v. A. T. & S. F. Ry. Co., 21 I. C. C. R. 329, 369.

[2] A. T. & S. F. Ry. Co. v. U. S., 191 Fed. 856.

tempts to prevent a discrimination by lowering an interstate rate were frustrated by lowering the competing intra-state rate still farther. Were the Commissioners afraid that an order that should merely lower these intermediate rates would be the signal for an orgy of rate cutting by the roads who are interested in seeing the Pacific seaports do as big a jobbing business as possible?

As to the logic of the competitive situation, it would seem that the straight path to the end desired would be to determine, if possible, what rates from the various zones are needed, *bona fide*, to meet the rail-and-water competition, and to order that the only rates exempt from the long and short haul prohibition shall be rates that are not lower than the competitive rates so found. The result would be quite similar to that of the rulings of the Commission: it would level off the summit of the mountain-peak of high rates which raises its bulk so forbiddingly to the western inland rate-payer, but the method would be more direct. A rate is either determined by water competition or it is not. If not, it is not entitled to exemption; but if it is so determined, what reason is there for putting a percentage limit on the relief granted? If the method here suggested be practicable, it would seem to offer the simplest way of separating "business" reductions of rates (made necessary by direct competition of routes) from "charitable" ones (due to market competition), and enacting that charity must begin at home.

In conclusion, a few general impressions present themselves. In the first place, all cases under the fourth section cannot but be witnesses to the wide margin of tolerance for different methods of constructing tariffs that exist in our regulative machinery. Strict mileage scales, tapering scales, blanket rates of wide extent,

and combinations both forward and (with the permission of the Commission) backward from a competitive terminal point, — all are allowed within the limits of this discretionary statute. All that is accomplished by rulings under the fourth section is to substitute blanket rates for rates that disregard distance still more violently.

In many cases the Commission, acting under its general powers, has gone farther than this. It has limited the extent of single blanket rates when that seemed excessive, and has prescribed rates of its own making in the form of modified distance scales. But this work tho of the utmost interest, is beyond the bounds of the present study.

Secondly, it seems that the Commission's ideal has much to do with the efficiency to be gained by placing the country's industries in the situations most favorable for them, and less to do with preventing the losses in transportation efficiency that come directly from wasteful carriage, in ways made familiar by Professor Ripley's analysis.[1] And, thirdly, one cannot but wonder whether the shifting to the carriers of the burden of proving that rates to intermediate points are reasonable may not have been, during the months that are past, a more effective weapon in lowering these rates than it can ever be again. For the attorneys of the railroads cannot fail to learn better and better now to support this burden of proof, as the Federal Department of Justice in enforcing the Sherman Act had to learn, through the fiasco of the Knight case, how to prove to the courts that an illegal combination existed, and emerged at the end successful.

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[1] Railroads: Rates and Regulation, as cited.

INDUSTRY IN PISA IN THE EARLY FOURTEENTH CENTURY

SUMMARY

Pisa's commercial greatness and prosperity, 339. — Her decline at the end of the thirteenth century, 340. — Industrial organization in the early fourteenth century, 341. — Its mature form, 341. — The gilds, 341. — The unorganized crafts, 347. — The crafts, organized but dependent, 348. — Industrial regulation by the gilds, 349. — By the city, 350. — Study of the woolen industry, 353. — The Curia Mercatorum, 354. — The Arte della Lane, 355. — The domestic system in the shell of the old gild organization, 356. — Conclusion, 358.

Up to the present time, our knowledge of Italian economic history in the early Renaissance is slight. There are the studies of Poehlmann,[1] Doren,[2] and Davidsohn [3] for Florence, of Broglio d'Anjano [4] for Venice, and of Schaube [5] for Pisa, but practically nothing of value besides. This is not due to the lack of available printed sources; for the printed Statuti of the Italian cities contain a mass of material which will amply repay investigation.[6] As an example of what can be done from the printed sources I have made this study from the Statuti of Pisa,[7] a contribution toward a fuller knowledge of the industrial side of Italian economic history.

[1] Poehlmann, R, Die wirthschaftspolitik der florentiner renaissance und das princip der verkehrsfreiheit.

[2] Doren, A, Studien aus der florentiner wirthschaftsgeschichte.

[3] Davidsohn, R, Geschichte von Florenz.

[4] Broglio d'Anjano, R, Die Venetianische seidenindustrie und ihre organisation bis zum Ausgang des mittelalters.

[5] Schaube, A, Das Konsulat des Meeres in Pisa.

[6] The Library of Harvard University has recently acquired a large collection of Italian Statuti, numbering nearly four hundred volumes.

[7] Statuti Pisani, edited by Francesco Bonaini in three volumes, Florence, 1854–70.

Pisa began her expansion before the first Crusade. In company with Genoa she had cleared the Tyrrhenian Sea of Saracens, and a victory over the Muslims in North Africa in 1087 opened the rich trade of North Africa. But in the next two decades came still greater expansion. The Pisans were pushing and ambitious. They used the Crusades early for their own commercial advantage. Their fleet, on which sailed the Archbishop of Pisa himself, the great Daibertus, was among the first to reach the Holy Land during the First Crusade. Only by its help was Jerusalem taken; and in return for this aid, the Pisans secured a quarter in Joppa, the port of Jerusalem. During the next five years, Pisan fleets aided in the conquest of many a city; the rewards were trading rights and quarters. The stately array of charters and grants of rights and quarters in Laodicea, Antioch, Tyre, Joppa, Jerusalem, Tripoli, and Acre,[1] made and constantly reaffirmed to her consuls throughout the twelfth century, show the extent of her commerce and power. Moreover she had favorable commercial treaties with the Greek Emperor[1] and the Kings of Busa[2] and Tunis,[3] which opened Constantinople and the whole of North Africa to her merchants in the thirteenth century.

The proofs of her wealth remain to this day. The Cathedral, far away from the markets and shops and busy wharves, was begun in 1118, the great wall in 1142, and the Baptistry in 1153. Even Villani, Florentine tho he was, concedes her greatness and wealth. Under the date of 1282 he writes, "At this time there were more powerful and rich citizens in Pisa than in any other city in Italy. The Pisans were lords of

[1] For these charters see Flaminio dal Borgo, Diplomi Pisani, pp. 85 to 103 inclusive.

[2] Ibid., p. 173. [3] Ibid., p. 210. [4] Ibid., p. 213.

Sardinia, of Corsica and of Elba, and their private revenues as well as those of the commune were immense. It may be said that their ships had command of the sea. In the town of Acre, they were most powerful, and were related to many of the rich burgers there." [1]

By the beginning of the fourteenth century, Pisa had passed the zenith of her greatness. In 1284, Genoa defeated her in the battle of Meloria. Her fleet was destroyed, thousands of her citizens killed, and at least 9,272 taken prisoners to Genoa and kept there for years.[2] Close upon this defeat came civil war, a papal interdict, and an alliance of Genoa, Lucca and Florence against the city. Her commerce declined.[3] Yet Italian cities have always shown a great power of recuperation, and Pisa is no exception.[4] Twenty-six years after Meloria, when Henry VII announced his coming into Italy, the city sent to him the sum of 60,000 ducats from the city treasury, and promised a like sum when he should enter Italy.[5] During Henry's campaign in Italy in 1312–13, Pisa was one of his chief allies and aids.[6]

During the centuries of the city's great commercial expansion and activity, there had gone on a development of industrial organization of which we know very little. It is not surprising, however, to find, in the late thirteenth and early fourteenth centuries, the organiza-

[1] Giovanni Villari, Cronica, vol. i, p. 416.

[2] Villari, History of Florence, vol, i, p. 280. The basis for these figures is the inscription on the church of St. Matteo at Genoa. At the end of Bonaini's first volume there is a fac-simile reproduction of this inscription in color.

[3] Schaube, A., Das Konsulat des Meeres in Pisa, p. 52. He considers the decrease of the number of men in the greater council of the Ordo Maris, the important commercial maritime gild, from 76 in 1286 to 24 in 1300, a very strong proof of commercial decline.

[4] For illustrations of the recuperative powers of the Italian cities, see the stories of the conflicts between Venice and Genoa in Horatio Brown, Venice, an Historical Sketch.

[5] Albertinus Mussatus, in Muratori, Rer. Ital. SS., vol. x, p. 334.

[6] Ibid., p. 411.

tion of industry in what may be called a mature form. Not only was the form of industrial organization mature, but this organization had become fossilized, so that any new development had to proceed under the shell of the old system. This happened, as will be shown presently, in the woolen industry.

The industry of the city was centered in the Arte della Lane, or Wool Gild, and the seven craft gilds which made up the Septem Artes.[1] The Arte della Lane and two gilds of merchants, the Curia Mercatorum and the Ordo Maris,[2] composed the Tres Ordines.

This division of the gilds into two groups we find in Florence also. The Tres Ordines of Pisa correspond to the seven greater gilds of Florence; and the Septem Artes of Pisa to the fourteen lesser Florentine gilds. The line of division is probably the distinction between the "popolo grasso" and the "popolo minuto" in each city. The seven craft gilds in Pisa were the gilds of the Smiths, the Skinners, the Shoemakers, the Tanners, the Butchers, the Vintners and the Notaries.

At the head of each gild, exercising a general oversight over the gild, were consuls or captains. They varied in number: in the Wool Gild there were three; the Butchers had six; and the Vintners four. Their election is interesting, in that it shows a clinging to the older forms of democracy, after the substance had gone, — an indication of the maturity of the organization. Sometime in December, the gildsmen assembled in a church, the Skinners, for instance, in the church of St. Laurentius, the Vintners in St. Lonardus, the Tanners

[1] This name is used in two senses: as a general name for the seven gilds, and as a specific name for the incorporated union of the gilds which was made in 1305.

[2] With these two gilds of merchants I shall not deal. The Ordo Maris has been carefully studied by Adolf Schaube in Das Konsulat des Meeres in Pisa, to which I have already referred. No study has been made of the Curia Mercatorum, which was composed of merchants trading by land.

in St. Michael in Burgo. The gildsmen, however, did not all take part in the election. They were merely present. As a good example, the method of election in the Butchers' Gild may be described.[1] The twelve councillors of the Consuls were joined by twelve "worthies," [2] chosen by the consuls. To these twenty-four men, an equal number of ballots was given, eighteen of which were blank, and six contained the word "elector." The six electors thus created at once chose the new six consuls and announced the result to the assembled craft. The consular term was one year, from January first. One gild prescribed that the consuls must be at least thirty years of age.[3] As a rule, either the consul or his father must have been born in Pisa, altho this deficiency could be overcome by a ten or twenty years' residence in the city, with the payment of dues and services to the city, and possessions worth at least £50.[4] We often find rules intended to keep the consular office in the hands of the actual masters who worked with their own hands, or at least directed workmen.[5] The candidate for the consulship must have exercised the craft at least ten years, "himself or his father," and he must have been exercising it continuously for the two years before the election. Such regulation represents an effort on the part of the actual workers to keep the control of the gild in their own hands. It would be necessary only in a late stage of organization, where the most powerful gildsmen had ceased to be industrial masters.

[1] I take the description from Bonaini, vol. iii, p. 1005. All references to Bonaini in the future will be merely by volume and page.

[2] "Bonos homines." In some of the gilds the councillors of the consul act alone, there being no addition of "bonos homines."

[3] The Vintners, vol. iii, p. 1105.

[4] Vol. ii, p. 46. For further matter on the election of consuls and their qualifications see, vol, ii, p. 46, vol. iii, p. 55, vol. iii, p. 873, vol. iii, p. 876, vol. iii, p. 915, vol. iii, p. 1022, vol. iii, p. 1058.

[5] Vol. iii, p. 876, vol. iii, p. 932, vol. iii, p. 1180.

This happened in the London Livery Companies, where the trading masters finally gained control of the gild organization.

The consuls were assisted by a council; sometimes, as in the Arte della Lane, and probably in the Smiths, by a greater and a lesser council.[1] The consuls were paid a salary, but sometimes we find that they could not refuse to accept the office without paying a heavy fine.[2] There was also a Camerarius, who handled all the moneys of the gild. He was elected, and held office for a year. Some gilds had also a notary, a messenger, and a judge.

Each gild had its own court,[3] presided over by the consuls in turn or by one of them,[4] before which all cases involving gildsmen were tried. In the Smith's gild, one consul sitting alone could try cases up to 20 solidi; cases involving more had to be tried by all the consuls.[5] No appeal could be taken from the gild court; its sentence was final.[6] If a gildsman felt injured by his consuls, he could not summon them before the Potesta or captains of the city, but he might complain to the other consuls, or to the captains and priors of the corporation of the Septem Artes.[7]

The problem of admission to membership in the gild is important. Did the gildsmen admit new members

[1] The councils were either chosen by the consuls as in the Smith's Gild, or elected as in the Vintner's Gild.

[2] The Vintners paid £3, and a half of all fines in the gild court. The Arte della Lane paid £15, but imposed a penalty of £13 for refusal to serve. The Smiths paid 15 d. for each shop, and a half of all fines in the court.

The symbols £, s., and d. do not refer to English money, but the livra, solidus and denarius of the Italian money of account. Twelve denarii made one solidus, and twenty solidi a livra. The metal content of these coins is not certainly known, but it was probably smaller than that of the present English money.

[3] Vol. iii, p. 957, vol. i, p. 89, vol. iii, p. 919.

[4] Vol. iii, pp. 867, 870.

[5] Vol. iii, p. 871.

[6] Vol. iii, p. 871. See also vol. iii, p. 867, vol. iii, p. 676.

[7] Vol. iii, p. 1179.

freely, or did they seek to maintain their privileges for themselves? Was their policy inclusive or exclusive?

In Northern Europe, the normal way to become a master gildsman was to serve as apprentice with some master for a specified time, learning the craft. The apprentice became a journeyman when his time of training had expired; and when he was able, he might open a shop of his own. In Pisa we find the usual system of apprenticeship. The term varied widely among the gilds. The Tanners of Spina required six years; the apprentice was to have 3 solidi a year, and was to furnish his own bread, wine, and bed.[1] The Skinners of the New Bridge required six years. Eight days' trial was allowed before the indenture was made. The master furnished food and drink. Before the apprentice could open a shop, he had to pay the gild 100 solidi.[2] The Tanners of St. Nicolas demanded an eight year term, paying two to six solidi per year.[3] The term of the Shoemakers was three years,[4] and of the Vintners five years.[5] The Skinners forbade giving work to any boy younger than sixteen years,[6] and required an apprenticeship of at least two years.[7] There is no trace of the requirement of anything like a masterpiece.

Could admission to the gild, with the right to open a new shop, be obtained in any other way than by serving an apprenticeship? Most gilds made provision for this. First, in the case of citizens. In the Spina Tanners,[8] membership could be inherited by sons, brothers, grandsons, and first cousins. The Butchers were liberal. All they required from a citizen was that he should take an oath to observe the Breve or gild charter, and to exer-

[1] Vol. iii, p. 964. The indenture had to be drawn up within 15 days.
[2] Vol. iii, p. 980, vol. iii, p. 987.
[3] Vol. iii, p. 992.
[4] Vol. iii, p. 1032. Fifteen days' trial was allowed.
[5] Vol. iii, p. 1138.
[6] Vol. iii, p. 1069.
[7] Vol. iii, p. 1083.
[8] Vol. iii, p. 964.

cise the craft without fraud.[1] The Wool Gild required from a citizen wishing to open a shop an oath to the gild, and the payment of forty solidi.[2] But in the case of strangers the requirements were more exacting. Ten livrae was generally required, with an additional bond of from twenty-five to fifty livrae, that the work should be honestly done.[3] The Smiths demanded a payment to the gild of only twenty solidi, with a bond of twenty-five livrae.[4] The Skinners' Gild, on the other hand, exacted a fee of fifteen to twenty-five livrae.[5] The Skinners of the New Bridge absolutely excluded everyone from the mastership who had not served a six year apprenticeship.[6] Strangers coming to the city might, however, be allowed to work for wages in the gild. Whether these various fees were prohibitive can best be seen from a study of wages. The shipwrights received three solidi to four solidi ten denarii per day. Finishers of leather (workmen in the Skinner's Gild) got five solidi six denarii a day, so that their fee of fifteen livrae would mean fifty-five days' pay. The fine of a lanaiuolus who refused the consulship was thirteen livrae. The Notary of the Tanners was paid three livrae per year, and of the Wool Gild eighteen livrae. On the whole, the requirements for admission to the gild mastership appear to be high, and the policy fairly exclusive, especially in the case of non-citizens.

The importance of the problem whether admission to gild-membership was easy or difficult at once becomes plain when we know that the gilds had political as well as industrial functions. Indeed, the political aspect may in some respects be regarded as the more important, for the gilds sometimes did not have a

[1] Vol. iii, p. 1013.
[2] For example, the Arte della Lane, vol. iii, p. 668.
[3] Vol. iii, p. 668.
[4] Vol. iii, p. 872.
[5] Vol. iii, pp. 987 and 988.
[6] Vol. iii, p. 1077.

monopoly of industry in their own particular crafts, while they may be said to have had a monopoly of political rights. Gildsmen exercised the franchise and membership in a gild was one of the few ways in which a man of the "popolo minuto" could have a voice in the city government. Under the commune, the gilds had no political power or official place in the city government. In 1188, however, it is to be observed that an oath of peace with Genoa is signed first by the twelve consuls of the City, and then by the Consuls of the Merchants and the Consules Artis Lane, before the signatures of the individual citizens.[1] This indicates that even thus early the Merchants and the Wool Gild were becoming influential in the state.

In 1254, a popular revolution, led by the "popolo grasso," overthrew the Commune, and set up a captain of the people beside the Potesta, while twelve "Anziani" or Ancients held the actual power in the city.[2] The council of the Anziani just after this Revolution, was made up of the consuls of the Ordo Maris, the consuls of the Ordo Mercatorum, and the consuls of the "Quattuor Artes." The four craft gilds which thus succeeded in gaining political power in 1254 were the Tanners, the Notaries, the Smiths, and the della Lane.[3] When next we find mention made of the gilds, the Arte della Lane has ceased to be considered as one of the craft gilds and is counted with the Ordines, and four new craft gilds have been given political power. By 1277, the year of our document,[4] the number of craft gilds with a place in the state was seven. This number

[1] Flam. del Borgo, Diplomi Pisani, p. 114.

[2] Schaube, op. cit., p. 43. Muratori, Rer. Ital. SS., vol. xxiv, pp. 644–645. A similar revolt took place in Florence four years earlier. Villari, History of Florence, vol. i, chap. 4.

[3] Schaube, ibid., p. 44.

[4] Schaube, op. cit., p. 44; Bonaini, vol. i, p. 53.

was never increased, and was definitely fixed at seven in the new constitution of the city in 1286.[1] New gilds had been organized; but the Captain of the city now swore "to compel all captains, councillors, and rectors of gilds and mysteries, except the Tres Ordines and the Septem Artes to surrender their charters." In the future "no other artificers, or men of any work, could have charters, or captains or consuls." Such fixing of the number of gilds is not uncommon. Loesch shows it occurred in Cologne,[2] Geering in Basel[3] and Villari speaks of it in Florence, where it occurred seven years later than in Pisa. In Florence this may have been due in part to the jealousy of the poletariat by the "popolo grasso" and "popolo minuto"; for their power would have been diminished by the formation of new gilds among the lowest class. In Pisa, a careful study of classes and class struggles might reveal a similar cause. Of the twelve Anziani, four had to be chosen from among the Septem Artes;[4] the others were chosen from among the Tres Ordines. The Anziani were elected by an assembly which included the Anziani in office, their two councils, the consuls of the Wool Gild, the priors and captains of the seven gilds and some other groups.[5] The individual gildsman has little or no direct part in all this process; but his gild has a very important place in the city government; and in this way we may say that he has the franchise and exercises political rights.

As has been already noted, all the industry of the city was not organized under the gild system, which was

[1] Vol. i, p. 631.

[2] Loesch, H. von, Die Kölner Zunfturkunden.

[3] Geering, T., Handel und Industrie der Stadt Basel, pp. 25 ff.

[4] Vol. i, p. 307. Not more than one Anziano was to be chosen from the same gild.

[5] Vol. i, p. 573.

restricted to eight crafts, — those of the Arte della Lane and the seven gilds. Of the remaining crafts, some were entirely unorganized, and some had an organization dependent upon another body. Let us look first at the entirely unorganized crafts. Any person coming to the city of Pisa to live might exercise any unorganized craft freely, provided that he paid the obligations demanded by the city of its citizens: the "data" and the real and personal "servitia."[1] In the years between 1313 and 1327, a reciprocity clause was introduced; no stranger, in whose city an exaction was made from a Pisan for exercising his craft there, could exercise his craft in Pisa unless he paid a similar exaction.[2]

Possibly to prevent an effort to organize and control certain crafts contrary to law, there were express statutes forbidding any interference with any citizen wishing to exercise these crafts. For example, no shipwright could forbid a citizen, or even a stranger, from building ships.[3] In 1286,[4] an attempt was even made to break down the exclusive monopoly over their craft of some of the seven gilds. Any citizen or countryman might sell meat in Pisa, provided that he swore before a judge to observe the regulations laid down for butchers. He was not, however, to be subject to the consuls of the Butchers unless he wished.[5] Likewise, any citizen wishing to prepare hides might do so without contradiction.[6]

There still remain the crafts which, tho they had an organization of their own, were dependent upon another body. The Candlemakers, the Apothecaries, the Doc-

[1] Vol. i, p. 288, vol. ii, p. 254.

[2] Vol. ii, p. 251.

[3] Vol. i, p. 306.

[4] The date may have been earlier, but our first statute dates from that year. There is a gap in the Brevia from 1164 to 1286.

[5] Vol. i, p. 311.

[6] Vol. i, p. 306. This rule was, however, broken down in 1306.

tors, one group of Dyers, the Tailors, the Hatmakers, the Mirror-makers and the Turners had organizations of this description.[1] They had their own Brevia, and their own Rectors and Consuls, but were subject in all things to the Consuls of the Curia Mercatorum, to which they were attached, and to the rules of the Breve of the Curia. The Consuls of the Curia Mercatorum swear, on entering office, that they are ready to give to each association of merchants or artificers subject to him, a Breve drawn up in the Curia.[2]

The origin and exact nature of these groups is not clear. But Geering [3] describes a similar situation in Basel. Here the craft gilds became political units, and in 1354 their number was fixed at fifteen. As new industries and new groups of workers developed, they were added to the older existing gilds, so that the gild of the Krämer, which corresponds in a rough way to the Pisan Curia Mercatorum, had under its jurisdiction no less than twenty groups of artisans. The development in Pisa may have been similar.

We come now to the question of the regulation of industry. In a craft which was organized as a gild, a great part of the regulation of that craft was in the hands of the gild itself, and was minutely provided for by the gild statutes. Fair dealing is enjoined upon gildsmen in their dealing with each other. One of the commonest rules is that no one of the gild shall enhance the rent of a gildsman's booth by offering more rent for it. And if the rent of a booth is increased by the owner, so that the gildsman vacates it, no other member of the gild may do any work of the craft there for three

[1] Vol. iii, pp. 29–33, vol. iii, p. 39, vol. ii, p. 42, vol. iii, p. 123, vol. iii, p. 125, vol. iii, p. 133, vol. iii, p. 136. In these pages their Brevia are given.

[2] Vol. iii, p. 42.

[3] T. Geering, op. cit., p. 42.

years.[1] In the Tanners' Gild we find rules such as this: that when a buyer comes to a tanner's shop, another tanner may not linger around to hear the said business.[2] There are a few regulations concerning the purchase of raw materials. The Smiths provide that coals must be bought from men of the gild; and if anyone buys coals on the Arno, — that is, as they are brought to the city, — he must divide them with any member of the gild who wants them, for the same price which he paid.[3] Tanners were not to buy skins of any regrator.[4]

Occasionally, we see protection of home industry, as when the lanaiuoli, men of the Wool Gild, are forbidden to bring wool on a distaff, or combed in any way, from outside the city into Pisa.[5] No tanner could buy any leather tanned outside the city;[6] certain tanners swore not to tan any leather outside the city, nor take any apprentice who would not take a similar oath.[7] The lanaiuoli were forbidden to open shops outside the city proper,[8] and the export of certain thread was prohibited.[9]

But there was also regulation of industry by the city; and this regulation was extended not only over the crafts which were not organized as gilds, but the gilds as well. The regulation of unorganized crafts by the city offers some interesting features. Altho teachers are not strictly craftsmen, they seem to have been supervised in a manner analogous to the craft regulation. Agreements among "masters of the art of grammar," [10] for

[1] Vol. iii, p. 679, vol. iii, p. 946.
[2] Vol. iii, p. 917, vol. iii, p. 956.
[3] Vol. iii, p. 865.
[4] Vol. iii, p. 917.
[5] Vol. iii, p. 689.
[6] Vol. iii, p. 926.
[7] Vol. iii, p. 935.
[8] Vol. iii, p. 670.
[9] Vol. ii, p. 230.

[10] This statute is of date 1313–37, i.e. when Petrarch was very young, possibly before he had done anything at all to create interest in classical antiquity. It may be an indication of the beginning of the Renaissance in Italy.

putting up their prices higher than an appended scale,[1] were forbidden under the penalty of an enormous fine, and expulsion from the city. "In these deeds many of them are found to have been culpable, making agreement to the injury and detriment of the city." Moreover, no one of the said masters teaching scholars, should dare or presume to drink in any cellar of the city of Pisa, under penalty of forty solidi for each offence.[2] Farriers, shipwrights, barbers, bankers, and tile-makers were given regulations and maximum price-scales by the city. In the case of the farriers, there is an increase in the scale of about a third between 1286 and 1303.[3] Laundrymen were not to wear their customers' clothes, and were compelled to make good any loss on the mere word of the customer.[4] The shipwrights, if dissatisfied, had to submit their grievances to a disinterested board of arbitration.[5] The barbers were not to shave or draw blood from any kind of leprous person.[6] Bankers and money changers had to be natives of Pisa; they were under supervision, and to prevent loss to depositors, they had to deposit £500 to £5,000 with the city.[7] Officials of the city, chosen in various ways, supervised these crafts.

Over the organized crafts, the gilds, as far as one may judge from the statutes, the city kept a firm hand. In 1286, all the Brevia of the Seven Gilds and the Arte della Lane were ordered to be handed in for correction and emendation within three days.[8] This correction was to be done by wise men, chosen by the Anziani, and working under the supervision of the Anziani. Correction might be required by all Potestas and Cap-

[1] The teacher could charge forty solidi per year per pupil, and accept a present of five solidi more.

[2] Vol. ii, p. 287.

[3] Vol. i, p. 461, vol. ii, p. 377, and other places.

[4] Vol. i, p. 228.

[5] Vol. i, p. 630, vol. i, p. 288.

[6] Vol. i, p. 306.

[7] Vol. i, p. 337.

[8] Vol. i, p. 201.

tains of the city, within one month after their entry into office.[1] The Breve of the Smiths was corrected eleven times between 1279 and 1306; in the year 1298 alone, three times.[2] In this way the state secured publicity and exercised a very real control over the gilds. Moreover, each new Potesta of the city was bound to compel the heads of all the gilds to make the members of their gilds swear to observe their Brevia.[3]

Limitation of output, agreements in restraint of trade, or compulsion upon others to prevent their trading on as large a scale as possible, were strictly forbidden by the city.[4] But in spite of this general prohibition, there are two entries in the Brevia of the Tanners, which seem to show a limitation of output by the gild. In one case it is forbidden to take more than sixteen hides from the tanning vat at one time;[5] in another, only two hides of camels and " bufali " are to be taken at once.[6] This, however, may have something to do with the technical processes of tanning.

A large part of the Brevia of the gilds is made up of regulations to insure honesty in weight, measure, and quality of the product, and these are constantly reinforced by city statutes. False cloths and adulterated saffron were confiscated. All wool and cotton sold had to be weighed by the public weigher.[7] In measuring cloth, the standard measure of the Curia Mercatorum had to be used,[7] and the cloth had to be measured in a prescribed manner. The balances of the smiths were inspected every six months by the Podesta of the city, accompanied by a master of the gild. If a balance was found to be false, the penalty was " for each ounze, one solidos." [8] The measures of the vintners were inspected

[1] Vol. ii, p. 71.
[2] Vol. iii, p. 886.
[3] Vol. iii, p. 886.
[4] Vol. i, pp. 287 ff.
[5] Vol. iii, p. 936.
[6] Vol. iii, p. 942.
[7] Vol. ii, p. 104.
[8] Vol. iii, p. 871.

once a month by the consuls of the Vintners' Gild; here we have state supervision through consuls of a gild.[1] Regulation by the city was not concerned alone with weights, measures and quality. Public health and public policy also were considered. The butchers were given careful regulations in the interests of public health to prevent the selling of diseased meats, and to prevent the accumulation of refuse.[2] Vintners were to close their shops in times of riot; no gambling or gambling devices were allowed in their shops, and no young man or woman between the ages of seven and eighteen years might enter them.[3]

Information in considerable detail is available concerning the woolen industry. This had really outgrown the old gild organization, and developed a new system of industry within the shell of the older organization. It was divided between the Curia Mercatorum, and the Arte della Lane. The members of the Curia Mercatorum, the Merchants, were large importers of undyed, unfinished cloths of linen,[4] of silk,[5] and especially of wool,[6] — " panni franchisci de Ultramontes." Attached to the Curia Mercatorum were groups of shearers and finishers, who finished these foreign cloths, and of dyers, distinct from the dyers and shearers of the Arte della Lane. Undyed cloth was also brought to Pisa by strangers. Such unfinished cloths, brought by strangers, had to be announced to the consuls of the Curia, and the consuls swore to divide these among the shops and dyers of the city for dyeing, or to " cause a just part of the pence to be restored among the dyers from those for cloths of strangers." [7] This means apparently that if such cloths were not divided, the

[1] Vol. i, p. 422.
[2] Vol. i, p. 307.
[3] Vol. i, p. 422.
[4] Vol. iii, p. 17.
[5] Ibid.
[6] Ibid.
[7] Vol. iii, p. 128.

dyers who were injured would receive a compensation. On each piece of cloth brought by a stranger, the consuls of the Curia Mercatorum received 12d. from the captains of the dyers.[1] The home dyeing industry was jealously protected. Anyone, whether a citizen or a stranger, who carried cloth from Pisa to Lucca to be dyed, and brought this dyed cloth back to Pisa, paid forty solidi for each piece.[2]

Some cloth seems to have been woven by a group dependent on the Curia Mercatorum; especially "barracan," a waterproof woolen cloth, and linen and silk.[3] The actual manufacture of cloth, however, was in the hands of the Arte della Lane, the Wool Gild. The Arte della Lane, as we know it, was probably formed by a union of the various groups engaged in the production of wool and cloth. There is a trace of such union in the fact that there must be three consuls; one chosen from the lanaiuoli, one from the stamaiuoli, and a third either from the lanaiuoli, the stamaiuoli or the shearers.[4] Who the lanaiuoli and stamaiuoli were will appear presently. The Arte della Lane, as has already been noted, was originally a craft gild and passed from the group of the craft gilds to the commercial and capitalist "ordines" in the period between 1254 and 1277. Some of its members even became members of the Ordo Maris,[5] while the union and community of interest between the three Ordines was always strong.[6] We may safely accept 1277 as the date by which the Arte della Lane had become capitalistic; and while it outwardly maintained the gild forms, industry was really carried on under the domestic system.

[1] Vol. iii, p. 128.
[2] Vol. iii, p. 35.
[3] Vol. iii, p. 50, vol. iii, p. 69, vol. iii, p. 601. The references are very scanty.
[4] Vol. iii, p. 651.
[5] Schaube, op. cit., p. 45.
[6] Vol. iii, p. 724.

The lanaiuoli stood at the head of the industry; they were the capitalist entrepreneurs. As late as 1305, there were some lanaiuoli who were not masters but were classed with workers who work for wages.[1] Other lanaiuoli seem to be engaged in the business of combing wool and selling combed wool,[2] while the lanaiuoli who were the entrepreneurs employed wool beaters, shearers of fleeces and wool combers in their own shops.[3] This may indicate that the lanaiuoli were originally preparers of wool — one of the initial crafts. In some way they secured control of the other processes. If this be true there is an analogous situation in Strassburg; the wool beaters, the initial craft, secure control of the industry.[4] The lanaiuoli were not the only masters of the gild, for we hear of the stamaiuoli and the shearers who might have consuls chosen from their number; but the lanaiuoli so completely dominated the gild that when a union of the Ordo Maris, the Curia Mercatorum and the Arte della Lane was made in 1305, the word lanaiuoli is used for the Wool Gild.[5] All through the Breve of the della Lane, it is the lanaiuoli for whom the other groups work. The statutes do not make clear the place of the stamaiuoli. They are mentioned only three times as yarn makers. It may be that they made yarn and sold it to the lanaiuoli, while at the same time, the spinners came directly to the lanaiuoli; or it may be that they had taken over other functions than yarn-making, and were not differentiated from the lanaiuoli.

The lanaiuoli had shops, and in them they employed shearers of fleeces, wool beaters and wool combers.[6] The wool thus prepared was given to the spinners to spin. The spinner must come to the shop of the lan-

[1] Vol. iii, p. 735. [2] Vol. iii, p. 689. [3] Vol. iii, p. 680.

[4] Schmoller, G., Die Strassburger Tuch und Weberzunft, pp. 418 ff.

[5] Vol. iii, p. 688. [6] Vol. iii, p. 680.

aiuolus, and carry the wool to his own house to spin.[1] To spinners living in the city not more than twenty-five pounds of wool could be given at one time; to those outside the city, not more than fifty pounds, and more could not be given before the first was returned.[2]

The wool, spun into yarn, was returned to the master's shop, and the weaver came for it. The price to be paid to the weaver was agreed upon in the master's shop, when the weaver fetched the yarn. The weaver was to bring back the shearings with every piece of cloth; he was not to sell or pledge any yarn or shearings to any person, and he was held responsible for loss on the master's word.[3] To protect the weavers, it was forbidden to any master to set up looms in his shop, or to weave cloth for others for pay; but the force of this was destroyed, in that the master was permitted to weave his own cloth.[4] This is an indication that masters had looms in their shops. Just what was the condition of the weavers, we do not know, but there are several statutes which indicate that it was one of subordination. They were forbidden to make "any union or company which could be against the office of the consuls."[5] For weaving cloth for pay, they were excluded from all other work of the gild, that is, they might never become masters.[6] At the same time, they had workmen working for them in their homes.[7] About these workmen we have only one bit of information: they could not depart from their master as long as they owed him money. Among the silk weavers of Lyons, we find an analogous situation; weavers working under the domestic system employed workmen, who were bound to them by a debt.[8]

[1] Vol. iii, p. 688.
[2] Vol. iii, p. 688. See also vol. iii, p. 670.
[3] Vol. iii, p. 703.
[4] Vol. iii, p. 707.
[5] Vol. iii, p. 703.
[6] Vol. iii, p. 707.
[7] Vol. iii, p. 704.
[8] Godart, J., L'ouvrier en Soie, Part I, pp. 136, 137 ff., 180 ff.

The statutes show that the evils of the domestic system were in existence. Prohibitions are constantly found against theft of the material and against the buying wool or cloth in any condition from anyone not a public master of the gild; and especially not from weavers.[1] The city government could be invoked to seize any person even suspected of having any stolen wool, yarn or cloth, and to compel the person to prove it was lawfully acquired.

When the cloth was returned by the weaver, it was sent to the fuller, to be fulled. To protect the fullers, it was ordered that no man could carry any cloth to the fulling mill except the fuller. He had to give surety to the gild (as did the dyer and sometimes the weaver) to protect the lanaiuolus against loss. The maximum price was fixed at three solidi a piece for fulling. The fullers might not full any cloth, except for a public master of the gild, unless the consuls gave them permission,[2] nor might they have looms in their houses.[2]

Among the dyers, some owned their own vats, others rented them. We find expressions like the following: "dyers, who rent vats and do not work by means of capital." Such dyers rented their vats from other dyers; but "if no person places a vat at his disposal, he shall not place anything in a vat without permission of him, whose it is." The price to be paid for dyeing cloth was to be agreed upon between the dyer and the lanaiuolus.[3] They were forbidden to make cloth.

The cloth finishers worked in their own shops. They had workmen, who were forbidden to leave the em-

[1] Compare the English Statute of 1455, against theft by workers in the domestic system. Of course, the rule forbidding people to buy cloth from weavers may also have been intended to prevent the weavers from becoming independent masters; but the whole tenor of the statutes shows that theft of materials was the thing most guarded against.

[2] The ordinances for the fullers, vol. iii, pp. 707–711 incl.

[3] Ordinances for the dyers, vol. iii, pp. 712–714.

ployers until these had been satisfied for the money which had been advanced. The workmen were expressly forbidden to receive cloth directly from a fuller — a check upon any production of cloth out of the hands of the masters.[1]

The production of cloth was restricted, so far as we can judge from the statutes, to the public masters of the gild — the lanaiuoli, the stamaiuoli and the shearers. Every avenue of leakage seems to have been closed. Spinners could not spin, weavers weave, fullers full, except for masters. Fullers were forbidden to have looms in their houses, dyers were not to make cloth. In short, no man who worked for wages in the craft was to make cloth. Yet the very repetition of these prohibitions probably means that cloth was being made surreptitiously, and that the monopoly of the capitalist masters was being attacked.

In conclusion, two things should be emphasized. First, the organization of industry was in a mature form at the comparatively early period under consideration, parallel to and stimulated by the city's early commercial prosperity. Secondly, Pisa remained a commercial city; she was not preëminently a manufacturing center, like the cities of Southern Germany. Her main interests were commercial, and the craftsmen never gained the prominence and power of their brethren in the north. Hence checks were imposed on the gilds, and consequently the gild organization, tho mature, was arrested in its development. This arrested development is seen in several important particulars, which distinguish Pisan gild organization from that of the cities of Southern Germany, where development went on unchecked. The gild organization in Pisa is limited to a small number of crafts; and even in these, the

[1] Ordinances for the cloth finishers, vol. iii, pp. 715–717.

Zunftzwang, characteristic of the northern cities, did not exist universally. There were no heavy requirements for admission to the mastership, for those who had served the apprenticeship and for townsmen; no masterpiece being required and the fees being small. City control was exercised not only by direct city supervision over the processes of the craft, but probably just as effectively by the requirement that gild statutes be submitted for examination and correction. This not only insured city control over the gild ordinances, but gave them publicity, a great factor then as now.

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MEDIATION AND ARBITRATION OF RAILROAD WAGE CONTROVERSIES: A YEAR'S DEVELOPMENTS

SUMMARY

Firemen's Eastern movement, 361. — Conductors' and trainmen's Eastern movement, 364. — The Newlands act, 364. — Minor controversies, 368. — Engineers' and firemen's contemplated Western movement, 370. — Suggested amendments to the new law, 371.

THE year 1913 was one of great activity and of some progress in the settlement of railroad labor controversies. The Erdman act gave place to the Newlands act, which provides for a Board of Mediation and Conciliation, and for more satisfactory methods of procedure. There were two concerted movements in Eastern territory in which the firemen and the conductors and trainmen obtained, through arbitration, increases in rates of pay and changes in working conditions; and there were two supplemental awards, one defining the terms of the award in the firemen's case, and the other interpreting the award handed down in 1912 in the engineers' case.[1] There were also two arbitration awards of minor importance; one adjusting differences between the four train service brotherhoods and the Southern Pacific, Pacific System, in the matter of electric service; the other relating to wages and working conditions of firemen, conductors, and trainmen on the Chicago and Western Indiana and the Belt Railway of Chicago. A strike of engineers and

[1] See Cunningham, "The Locomotive Engineers' Arbitration," in this Journal, xxvii, pp. 263–294. For a detailed account of the mediation and arbitration movement prior to 1912, see the monograph by Dr. Charles P. Neill, in Labor Bulletin, no. 98.

firemen on the Bangor and Aroostook resulted in victory to the management, which had declined an offer of mediation; and on the Southern Pacific, Atlantic System, a strike of engineers, firemen, conductors, and trainmen was brought to an end through mediation. In Southern territory a dispute between the engineers and the Queen and Crescent lines was adjusted through mediation. At the close of the year, arbitration proceedings were under way to settle a controversy arising from the proposal of a new working agreement by the conductors and trainmen on the Burlington; and preparations were being made by the engineers and firemen for a concerted movement for a complete revision of schedules in Western territory.

It will be remembered that in 1912 the Eastern railroads were unwilling to arbitrate the engineers' demands under the Erdman act, and the controversy was settled by an extra-legal board of seven men (five representing the general public). The award in that case was so unsatisfactory to the railroad brotherhoods generally that when, early in 1913, the firemen presented their final demands to the Eastern railroads, they insisted upon arbitration under the law, whatever its defects; and the railroads, after making several counter propositions,[1] yielded under protest. Hearings were held in New York from March 10 to April 5, and the award, affecting the interests of 31,000 men, was handed down on April 23.[2]

The case of the firemen was presented by their president, W. S. Carter, who asked for uniform rates of

[1] To grant advances (about five per cent) relatively the same as those awarded in the engineers' case; to arbitrate through a board of seven, as in the engineers' case; or to arbitrate through a board of six, representing equally the firemen, the railroads, and the public.

[2] The arbitrators were: W. L. Chambers, Washington, D.C.; W. W. Atterbury, vice-president, Pennsylvania Railroad; and Albert Phillips, third vice-president, Brotherhood of Locomotive Firemen and Enginemen.

wages and uniform rules of employment, except that where rates were already higher or rules more favorable than those demanded, they should be maintained; and for increases in rates of wages and changes in certain rules, except where they were already better than those demanded. These demands were embodied in a series of ten articles, which provided for: (1) a definition, in terms of hours and miles, of a day's work; (2) minimum rates of wages for firemen classified according to engine weights on drivers, and for hostlers and for helpers on electric locomotives according to the nature of the service; extra compensation at a flat rate for firemen in local freight service; two firemen on all engines of 200,000 pounds or over in through freight service; (3) more liberal basis of computing overtime; (4) payment for initial and final terminal delay; (5) computing of continuous time in cases of absence from home terminals after fifteen hours; (6) supply of coal in the tender where it could be reached from the deck of the engine on all trains having but one fireman; (7) relief from work not a necessary part of a fireman's duties; (8) payment for time tied up between terminals; (9) continuation of existing rates and rules better than those demanded; and (10) the award to be effective as of July 1, 1912, the date when the demands were originally presented.

In support of these propositions it was urged that uniformity of rates and of rules should be granted without reference to the comparative wealth or poverty of the various railroads, and with sole regard to the fair deserts of the men; that while the introduction of larger locomotives had added to the labors of the firemen and increased their productive efficiency, there had been no corresponding increase in wages, altho the cost of living had substantially increased. The

request for a second fireman in through freight service was based upon the theory that the resulting increase in tractive efficiency would produce revenues more than adequate to provide for the increased wage burden. On the other hand, Elisha Lee, chairman of the Conference Committee of Managers, contended that uniformity would result in unjust obligations upon the weaker lines, and that the presence of a saving clause among the articles was inconsistent with the plea for uniformity. He declared, moreover, that it had been the practice of leaders of railroad labor to use the concessions made by one railroad or by the railroads of one territory as the basis of claims elsewhere, and that uniformity was therefore impossible. The claim of the firemen that their work should be measured upon the basis of engine weights, he assailed on the ground that the large, modern engines are equipped with improved labor-saving appliances not found on the older types. He admitted that in certain instances an extra fireman would be desirable, but contended that such cases should be made the subject of local conferences. Each side called many witnesses and submitted elaborate statistical exhibits. The testimony alone amounted to over two thousand printed pages.

The award granted advances in wages amounting to about eight per cent, or slightly more than had been offered by the railroads, but much less than had been sought. It approved the principle of uniformity within the Eastern territory, and also the practice of computing wages upon the basis of engine weights on drivers. It granted a part of the requests for payment for overtime and for terminal delay. It outlined the procedure for determining the necessity for a second fireman; and it relieved firemen from such work as cleaning engines and procuring tools. Under the law the award became effective as of May 3, 1913.

In the meantime the conductors and trainmen in Eastern territory were presenting demands for increased wages, which were refused on the ground that existing rates were liberal and working conditions favorable. The men proposed arbitration under the federal law, but this was refused on the ground that the interests involved in the controversy were too great to entrust to a board of three arbitrators, since the decision must depend upon the vote of one man. While the leaders of the conductors and trainmen were polling their men on the question of calling a strike, the Newlands bill was introduced in Congress, and at a hearing held in Washington on June 20, representatives of the brotherhoods and of the managers indorsed the measure and agreed to submit their differences to arbitration when the proposed changes should be made in the law.[1] In the absence of opposition from any source, except on matters of detail, the bill was pushed through Congress, and on July 15 it became a law.

Under the Newlands act, the number of arbitrators may be either three or six, according to the importance or magnitude of the controversy. A Board of Mediation and Conciliation is established to take over the duties which had been performed by Judge Knapp and Dr. Neill in *ex officio* capacity. The new board is made up of a commissioner, an assistant commissioner, and not more than two other officials of the government serving *ex officio* as needed.[2] The law is more elastic than its predecessor in its provisions governing the time in which arbitration hearings shall be held, and the period in which the award shall be effective. It declares that awards in the future must be confined to

[1] Mediation, conciliation, and arbitration in controversies between railway employees and their employers. 63 Cong., 1st Session, Senate Rep. 72.

[2] The board consists of W. L. Chambers, commissioner; G. W. W. Hanger, assistant commissioner, and Judge M. A. Knapp.

questions specifically submitted to arbitration or matters bearing directly thereon, — a result of the criticisms of the award in the engineers' case. It provides that the parties to an arbitration may set forth in the stipulations that disputes growing out of the interpretation of the award may be referred back to the board of arbitration or a sub-committee thereof for supplemental action.

When the time came to draw up the stipulations under which the demand of the conductors and trainmen should be arbitrated, the Conference Committee of Managers submitted eight counter propositions for consideration by the arbitrators. These were withdrawn upon the vigorous protest of the labor representatives.[1]

Hearings were begun in New York on September 11, and continued through October 10. The award, effective as of October 1, was filed on November 10. About 23,000 conductors and 63,000 trainmen were concerned.[2]

The articles in the case, seventeen in number, were technical and complex, hence difficult to restate ac-

[1] As they are certain to reappear in future controversies, they are given here in full: 1. When a minimum day's wage is paid in any class of service it shall entitle the railroad to the full mileage or hours of service paid for. 2. In no case shall double compensation be paid. 3. For fixing the basis of compensation — *i.e.*, whether passenger, through or local freight, yard, etc. — the same classification shall be applied to all members of the train crew. 4. All monthly guarantees shall be abolished. 5. That consideration be given to a reduction of existing rates of pay of yard brakemen and of passenger conductors and trainmen on long continuous runs where there is an opportunity to make excessive mileage in a limited number of hours. 6. Employees in two or more classes of service on continuous duty or under continuous pay shall be paid the rates applicable to the different services performed with a minimum equal to ten hours at the lowest paid service. 7. On passenger and freight trains where, under extra crew laws, additional men are required, the rate of pay for all brakemen shall be twenty per cent below rates established for brakemen on trains not affected by such laws. 8. The rates and rules awarded by the arbitration shall supersede rates and rules now in effect which are in conflict therewith.

[2] The arbitrators were: Seth Low, president, National Civic Federation; John H. Finley, president, College of the City of New York; W. W. Atterbury, vice-president, Pennsylvania Railroad; A. H. Smith, senior vice-president, New York Central Lines; L. C. Sheppard, senior vice-president, Order of Railway Conductors; and D. L. Cease, editor, The Railroad Trainman.

curately in general terms. They provided for: (*a*, *b*, and *c*) minimum rates of wages, and monthly guarantees, and a basis of computing overtime in passenger service; (*d*) assurance that benefits obtained through arbitration should not be offset by reductions in crews or increases in mileage assignments; (*e* and *i*) increases for special or incidental service on the basis of increases granted for regular service; (*f*, *g*, and *h*) minimum rates of wages in the various classes of freight service, and overtime as time and one-half in regular freight service; (*j*) a definition, in terms of hours and miles, of a day's work in freight service; (*k*) monthly guarantees in freight service; (*l*) payment of full rates for "deadheading" service; (*m*) payment of unassigned freight crews held at other than their home terminals after twelve hours; (*n*) payment of time and one-half to crews on double-headed trains, and of double time in cases where either or both engines used are of the Mallet type; (*o*) payment of "Chicago standard" rates of pay in yard service, and of overtime as time and one-half; (*p*) assurance that existing earnings of conductors or trainmen should not be diminished in any case by the provisions of the award; and (*q*) assurance that existing schedules or agreements not specifically amended by the award should be unchanged.

The case of the conductors and trainmen was presented jointly by A. B. Garretson, president of the Order of Railway Conductors and W. G. Lee, president of the Brotherhood of Railroad Trainmen. The argument followed the same general lines as in the firemen's case: uniformity of wages and of rules not only within Eastern territory, but throughout the country; increases in wages upon the ground of increased labor, risk, and responsibility; increased productive efficiency; and increased cost of living. For the Conference

Committee of Managers, Elisha Lee flatly denied that conditions had changed sufficiently since the Clark-Morrissey award in 1910[1] to warrant any increase whatsoever. As in the firemen's case, he attacked the principle of the saving classes (*d*, *p*, and *q*) as inequitable and inconsistent with the plea for uniformity. Many witnesses were called, and voluminous statistical exhibits were introduced by both sides. The testimony exceeded in volume that taken in the firemen's case.

The award authorized increases amounting to about seven per cent, or less than half what had been demanded. This advance was based largely upon the increase in cost of living in the three years since the Clark-Morrissey award. The plea for uniformity as between Eastern and Western territories was disallowed.

> This Board believes that before a standardization of pay for conductors and trainmen can be brought about between the East and the West, the organizations concerned should formally and officially commit themselves to the policy of standardization between East and West. In the absence of such an accepted policy, were this Board to place the pay of conductors and trainmen in the East, as they are asked to do, on the Western basis, such an increase of the wage scale in the East might serve, in the prevailing opinion of the Board, to bring about a new movement in the West to secure the old differential against the East.

A recommendation was made, however, that "some public authority authorized by Congress" should make an inquiry into the matter; and it was suggested that the Commission on Industrial Relations might undertake the work. The increased productivity of train crews, whether through double-heading or otherwise, was admitted; but this was attributed to increased efficiency of management rather than to conscious

[1] See Cunningham, in this Journal, xxvii, pp. 276–277.

effort of the men. The request for time and one-half and double time for such service was therefore denied, as was the request for overtime as time and one-half in certain varieties of service, upon the ground that in railroading overtime cannot be prevented either by the management or by the men, and "that punitive overtime, as it is called, is an unsound principle when applied to the running of trains." As to the effect of the award upon the railroads and the public, the board said:

> This Board . . . believes that it must make its finding as to what is a proper rate of pay to be awarded . . . without any reference to the dilemma in which the railroads are evidently placed by the laws which make it impossible for them to increase passenger and freight rates without the authority of the Interstate Commerce Commission, or of the Railroad Commissions of the various states. . . . The Interstate Commerce Commission, and not this Arbitration Board, has the duty of determining whether the railroads can earn, in addition to their other charges, without an increase of freight rates, the rates of pay that this Board believes to be due at the present time to the conductors and trainmen.

The other railroad labor controversies of 1913 which have been mentioned do not call for extended notice here, since those which were of any great importance have been continued into the present year. In the case of the Chicago and Western Indiana and the Belt Railway of Chicago, a board of three [1] ordered some changes in working conditions, but denied the requests for increases in rates of pay, except in work service, partly on the ground of comparison with rates paid by other lines similarly situated and partly because of inadequacy of evidence. The representative of the employees dissented. This award was filed on September 16.

[1] The personnel of this board was: E. S. Huston of Washington, D.C.; F. A. Burgess, assistant grand chief, Brotherhood of Locomotive Engineers; and W. J. Jackson, president, Chicago and Eastern Illinois Railroad.

The arbitration on the Pacific System of the Southern Pacific road arose out of a controversy having to do mainly with the classification of employees on certain electric lines about San Francisco bay operated on street railway franchises. The management contended that the conditions of service warranted an official distinction between such employees and those engaged on the other electric (suburban) lines of the company. Most of the points at issue were adjusted through mediation, but the determination of what constitutes street car service was left to a board of arbitration of three men,[1] which decided, October 18, in favor of the management by majority vote.

Questions of discipline were chiefly involved in the differences between the Southern Pacific, Atlantic System, and its employees in train service. The four brotherhoods, having failed to obtain satisfactory results through individual conferences with the management, pooled their issues and presented a joint list of sixty-seven grievances for adjustment; but the management stated its willingness to confer jointly only as to matters of joint concern. It also submitted a communication which contained practically the same counter propositions as those which the Conference Committee of Managers had presented to the conductors and trainmen in the Eastern wage dispute. It appealed to the Board of Mediation and Conciliation, and so notified the representatives of the employees, but a strike was ordered on the ground that there were no matters which were proper subjects of mediation. As a result 2,500 men were out from November 13 to 17, when a settlement was arranged to the effect that the management would meet the joint committee and take

[1] John F. Davis, of San Francisco; M. E. Montgomery, vice-president, Board of Locomotive Engineers; and W. R. Scott, general manager, Southern Pacific Company.

up each grievance, with the understanding that in case of disagreement the whole matter would be referred to the Board of Mediation and Conciliation.

A board of six arbitrators [1] assembled in Chicago in November to consider thirty-nine articles proposing a revision of the schedules affecting conductors and trainmen on the Burlington. The date fixed for filing the award was February 1, 1914.

The railroads in Western territory were confronted in October by a joint demand for a revision of schedules affecting the engineers and firemen,[2] and in return they abrogated the existing schedules. The effect of this move was to put an end to all rates of pay and rules of employment better than those demanded; thus forestalling the attempt of the employees to "standardize upwards" through the application of a saving clause in the articles to be presented for arbitration. This was the situation at the end of the year. It is a situation which presents several interesting aspects that should be noted. Here are two brotherhoods, between which there have been many differences, now united under terms of a formal working agreement. That the conductors and trainmen saw fit to withdraw from what had been proposed as a general movement of the train service brotherhoods may be due to the fact that at the time the matter came up for decision, the award in the Eastern concerted movement was being determined, and the necessity for conservatism was sufficiently apparent in view of the fact that standard-

[1] Henry S. Boutelle, of Chicago; G. J. Diekema, of Holland, Michigan; E. P. Curtis, vice-president, Order of Railway Conductors; E. L. Harrigan, of the Brotherhood of Railroad Trainmen; P. H. Morrissey, assistant to the president of the Burlington; and Fairfax Harrison, president of the Chicago, Indianapolis, and Louisville Railway (succeeded by Pierce Butler of St. Paul upon resignation to accept election to the presidency of the Southern Railway).

[2] The proposed schedules are given in full in the Railway Age Gazette, lv, pp. 825–826.

ization as between East and West had occupied such a prominent place in that case. The attitude of the railroad managers is also significant. They insist that if they must arbitrate, they too must stand to win concessions, and that rates and rules unfavorable to them must be considered by any board which would change those which are unfavorable to the employees. It is obvious that if this contention is not sustained, the federal law as it stands can hardly be expected to serve its purpose, — namely, to prevent injury to the public interest through interruption of the transportation service.

A number of suggestions have been made as to amendments to the Newlands act. One, proposing the extension of its terms to provide for the settlement of disputes between industrial corporations, subject to the authority of Congress, and their employees, may be disregarded here as irrelevant to the subject of this paper. The suggestion, from a railroad source, that the scope of the act be widened to apply to all classes of railroad men engaged in the interstate business of their employees is worthy of consideration. But without hazarding a prediction as to the attitude of the courts toward such a provision, its practical application would be extremely difficult. Such an amendment, if constitutional and practicable, would have one certain result; it would force the employees concerned into closer bonds of organized labor. For unorganized labor cannot take advantage of the Newlands act except through some form of organization. Another suggestion is to associate the Board of Mediation and Conciliation and the Interstate Commerce Commission, either in coördinate or subordinate relation, to the end that the tribunal responsible for increasing wages should be also responsible for adjusting rates

so as to meet the increased expenses. But this implies that there is such a delicate balance in the finances of a railroad that a slight increase in expenses will throw the whole out of adjustment. Fortunately, such is not the case; and if it were, the burden imposed by a board of arbitration, chosen under the present arrangement, would hardly produce such an effect. The award in the case of the conductors' and trainmen's Eastern movement provided for an annual increase of $6,000,000 in wages; this stated in terms of operating expenses means only about 0.8 per cent. Futhermore, the suggestion ignores the fact that the Board of Mediation could obtain wage increases for employees only as concessions from the management. It is the board of arbitration in a controversy and not the Board of Mediation that has authority to increase wages; and after an agreement to arbitrate has been signed and the arbitrators have been appointed and qualified, the Board of Mediation has no further jurisdiction in the matter beyond final custody of the documents connected with the case.

The Newlands act has not yet been sufficiently tested to determine its efficiency or to demonstrate the need for its modification or elaboration. If under its operation the awards of the arbitrators come to command public confidence to an extent that neither party to a dispute will dare assume responsibility for open hostilities, the law will have accomplished its purpose.

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NEW YORK.

REVIEW

KEYNES' INDIAN CURRENCY AND FINANCE[1]

THIS book, by the editor of the *Economic Journal*, stands in the first rank among the numerous books on Indian currency that have appeared since the report of the Fowler Committee of 1899. Shortly after the chapters of the book were written, the author was appointed a member of the Royal Commission (of 1913) on Indian Finance and Currency.

"If my book had been less advanced," he says in the preface, "I should, of course, have delayed publication until the Commission had reported, and my opinions had been more fully formed by the discussions of the Commission and by the evidence placed before it. In the circumstances, however, I have decided to publish immediately what I have already written, without the addition of certain other chapters which had been projected."

It is not as a historian of Indian currency that the author writes, but rather as a scientific interpreter and critic of the currency system as it is and as it has recently developed. Among the eight topical chapters which constitute the book the three that contribute most that is of a general interest to the subject are those dealing with "The Gold-Exchange Standard," "The Present Position of Gold in India and Proposals for a Gold Currency," and "Indian Banking."

In the chapter on the Gold-Exchange Standard, Mr. Keynes shows how that standard, proposed for India as early as 1876 by Mr. A. M. Lindsay, of the Bank of Bengal, and for more than two decades most ably defended by him, was rejected by the British authorities, only to become later, through administrative orders, "the head of the corner."

[1] Indian Currency and Finance. By John Maynard Keynes. London: Macmillan, 1913. Pp. viii, 268.

He maintains that the gold-exchange standard is not in the currency world of today an anomalous standard, as is generally supposed, but merely one that "carries somewhat further the currency arrangements which several European countries have evolved during the last quarter of a century . . ." (p. 29). What he has in mind is the practice followed by the central banks in certain European countries, of keeping in their portfolios a supply of short time foreign bills as a sort of secondary gold reserve for use in times of emergency. Nations like England, which are strongly creditor, need not resort to this practice, and may rely upon varying their Bank discount rates to attract gold or to hold it; but nations that are strongly debtor, like Russia, Austria-Hungary, and the great trading nations of Asia, he says, must deliberately adopt this practice or resort to the alternative of "a much larger reserve of gold, the expense of which would be nearly intolerable" (pp. 26 and 27).

The reviewer is unable to see the close fundamental likeness which Mr. Keynes finds between the gold-exchange standard and this practice of holding foreign bills. Under the gold-exchange standard, the government sells drafts against its foreign gold credit (*i. e.* its gold reserve), when money at home is relatively redundant, as evidenced by exchange having reached the gold-export point. Thereby it relieves the redundancy through withdrawing from circulation and locking up the local money received in payment for the drafts. Under the practice of holding foreign bills to protect the money market, the central bank sells its foreign bills, when money at home is relatively scarce, as a means of securing gold for importation or of preventing its exportation. In the former case the sale of drafts takes the place of an exportation of gold, and the resulting withdrawal of local money from circulation is in essentials an exportation; in the latter case the sale of the drafts abroad is part of a process for securing gold for importation or for preventing its exportation.

Mr. Keynes' assertion in connection with the gold-exchange standard, that the United States in dealing with her dependencies has "imitated, almost slavishly, India" (p. 27,

note), cannot be susbtantiated. The Philippines have a simpler and purer form of the gold-exchange standard than has India. The Indian system has various complicating elements: the sale of council bills for fiscal purposes; the paper money reserve, whose functions decidedly overlap those of the gold standard reserve; and the absence of anything like as rigid and automatic requirements as the Philippines possess for adjusting the monetary circulation to the norms demanded by a strict gold standard. The gold-exchange standard, moreover, was put into complete operation in the Phillippines on October 10, 1903, *i. e.*, before the Secretary of State for India issued the notification of 1904, expressing his willingness to sell council bills on India at 1*s.* 4⅛*d.* per rupee without limit. In the Philippines, the requirements for redemption in drafts are essentially legislative and mandatory; in India they are administrative and optional. The Philippines did follow very closely the principles of the gold-exchange standard based upon Ricardo, as those principles were developed by Mr. A. M. Lindsay. These were the principles, however, which India formally rejected in 1899, and toward which she has been moving ever since, tho with a slow and halting step.

The Fowler Committee in its report of 1899 said (p. 16):

> "We are in favor of making the British sovereign a legal tender and a current coin in India. We also consider that, at the same time, the Indian Mints should be thrown open to the unrestricted coinage of gold on terms and conditions such as govern the three Australian Branches of the Royal Mint."

British gold was declared legal tender at the rate of 15 rupees to the sovereign in 1899, and measures were immediately taken under consideration looking toward the establishment of a branch of the Royal Mint at Bombay. Proposals to this end were accepted both by the Secretary of State for India, and by the Viceroy's Council. An attempt in 1900 to force sovereigns into circulation proved unsuccessful; the sovereigns were rapidly exported, returned to the government, or hoarded. Since that time there has been some progress

in the introduction of gold coins into circulation, particularly in Bombay and the Punjab, altho in the greater part of India the use of gold coin is still negligible and is liable to continue so for a long time to come. Despite repeated efforts by the Indian Government, and a voluminous correspondence between the Indian Government and the British Treasury, no branch of the Royal Mint has yet been established in India for the coinage of gold money. Apparently the British Treasury early made up its mind that the establishment of such a mint in India was undesirable, and undertook to wear out the patience of the Indian Government by raising all sorts of technical objections.

Mr. Keynes is opposed to the establishment of a mint at Bombay for the coinage of gold, and sees little to be gained and much to be lost from infusing gold coins into general circulation. The proper place for the gold, he maintains, is not in circulation, but centralized in reserves. Gold coin in circulation is practically unavailable to meet foreign demands for gold. Furthermore, the substitution of gold coins for silver rupees or rupee notes in the circulation would lessen the profits realizable from seigniorage on rupee coinage and from interest on the invested portion of the paper money reserve; and, since "it is the fiduciary coins with which the public are most eager to part" in time of crisis, "the infusion of more gold into circulation would . . . not correspondingly reduce the amount of . . . reserves which Government ought in prudence to keep" (p. 91). Furthermore, it is desirable to encourage the popularity of notes in a country like India, where checks are not likely to be used for many years to come to a dominating extent, since "it is only thus that a proper degree of seasonal elasticity can possibly be secured" (pp. 96 and 97). India, moreover, already wastes large resources in the needless accumulation of the precious metals, and the Government ought not to encourage in the slightest degree this ingrained fondness for handling hard gold (p. 101).

Few of the many books on Indian currency contain much information about Indian banking. One of the merits of

Mr. Keynes' book is a good chapter on this subject — a subject that seems destined to come into greater prominence in the near future. In several respects India's banking troubles are similar to those of the United States. Her banking system is decentralized; her trade demands are highly seasonal in character, while she has no elastic bank-note system to act as a buffer; her government revenues are large, and the fact that varying amounts of government funds are kept on deposit in the few Presidency banks or hoarded in the government treasuries creates a disturbing factor in the money market. Banks in India are poorly regulated, and most of them have been increasing their deposits in recent years much more rapidly than their reserves or their capitals. There are growing up in various parts of India numerous so-called banks which in America would be characterized as "wild cat banks of the worst sort."

At present there is much agitation for a state bank in India. The Indian Government is already performing many of the functions of a central bank, in connection with such matters as note-issue, the management of government cash balances, and the regulation of the foreign exchanges. "Other benefits," says Mr. Keynes, "cannot be obtained easily, so long as these functions are utterly divorced from those of banking proper" (p. 236). The only adequate solution of the difficulty he finds in the establishment of a state bank, not on the model of the Bank of England, but rather upon that of some such bank as the Reichsbank, the Bank of Holland, or the Bank of Russia.

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